

EXHIBIT 5

Exhibit 5 to Second Amended Complaint

US 8,926,490

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 1**1. A system for treating depression in a subject comprising:****Infringing Activity**

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant makes, provides, sells, and induces the infringing use by customers of a system for treating depression in a subject according to claim 1.¹



<https://brainfrequency.ai/overview>

¹ The Brain Frequency website lists “locations” in four states: Gladden Longevity in Texas (<https://www.gladdenlongevity.com/> and <https://brainfrequencydallas.com/>), Live In Alignment in California (<https://www.liveinalignment.org/>), BioMed Scottsdale in Arizona (<https://thebiomedcenter.com/>), and Energy4Life Centers in Utah (<https://energy4lifecenters.com/>).

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US 8,926,490, Claim 1 Infringing Activity

Patient: "Jason" Valid Psychometric Assessments Subjective			
Assessments	02/09/2022	02/22/2022	03/09/2022
Executive Functioning Scale	43	31	11
Anxiety	20	14	6
Depression	38	38	12
Brain Body Connection	29	15	8
Sleep	17	6	0
Post Trauma	58	22	6
Concussion Symptoms	65	47	33
Cravings	4	0	0
Obsessive Thoughts & Behaviors	37	23	11
<i>* Higher number represents more severe symptoms</i> <div> SEVERE MILD NORMAL </div>			

<https://brainfrequency.ai/overview>

How do I know if I can integrate Brain Frequency™ into my clinic? ^

Since Brain Frequency™ is able to treat a wide array of mental health, neurological disorders, and cognitive functioning, we've separated our abilities into two distinct practices. One is for mental health and medical practitioners to treat DSM-5 diagnosable issues like depression, bipolar disorder, concussions, and the like. The other is for functional medicine and wellness, used to treat things like general sleep issues, mental fog, trouble with short term memory, tinnitus, etc. You can see more about this distinction on the Affiliate Program page.

<https://brainfrequency.ai/provider-faqs-1>

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Brain Frequency™: A Ground-Breaking Therapeutic Approach to Your Brain's Possible Best

Brain Frequency™ identifies the optimal operating frequency unique to your brain, and identifies those areas functioning below optimal frequency. Using this brain mapping information, the Brain Frequency™ software predicts mental health, neurological, and cognitive disorders, and will immediately recommend a treatment protocol.

HOW IT WORKS

STEP 1

Brain Mapped

Your brain is mapped with an EEG, then your brain waves are analyzed to produce a personalized brain map identifying current and optimal frequencies in 19 areas of your brain.

STEP 2

Predictive Diagnostics

Based on your brain map and self-reporting, Brain Frequency™ AI identifies the possible mental health, neurological, and/or cognitive diagnoses and opportunities to create your personalized brain frequency protocols.

STEP 3

Personalized Plan

Your brain map and treatment plan will be presented to you. The treatment course and the number will depend on what your brain needs. Your progress will be mapped with additional EEG(s).

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequencydallas.com/welcome1>

OUR TECHNOLOGY

We utilize a variety of technologies to support and regenerate the brain. Brain Frequency (iTMS), EEG's, neurofeedback, audio visual entrainment, and neurocognitive testing to name a few. These technologies help us to better understand the brain and develop personalized treatment plans for you.

<https://energy4lifecenters.com/brain-health/>

a magnetic field generator adapted to apply a magnetic field to a head of the subject, wherein the

Information appearing on Brain Frequency's website, and the TMS manufacturer website/product sheets confirm a magnetic field generator adapted to apply a magnetic field to a head of the subject.

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US 8,926,490, Claim 1**Infringing Activity**

**magnetic field
generator comprises:**

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

<https://brainfrequency.ai/patient-faqs>

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<https://brainfrequency.ai/patient-faqs>

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability. Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

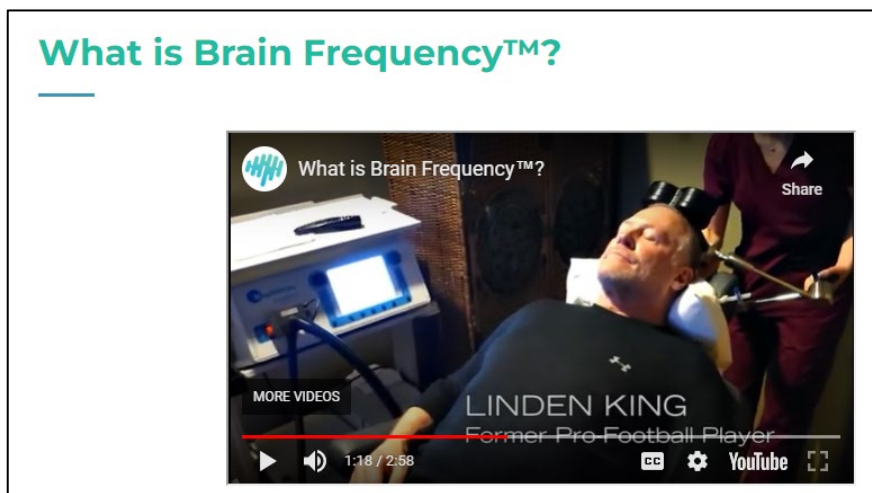
<https://brainfrequency.ai/affiliate-program>

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

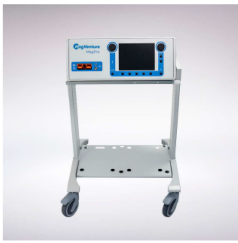
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<https://brainfrequency.ai/overview>

MagVenture
Research. Treatment. Results.



MAGPRO X100
Biphasic, Monophasic, Biphasic Burst (Theta Burst)

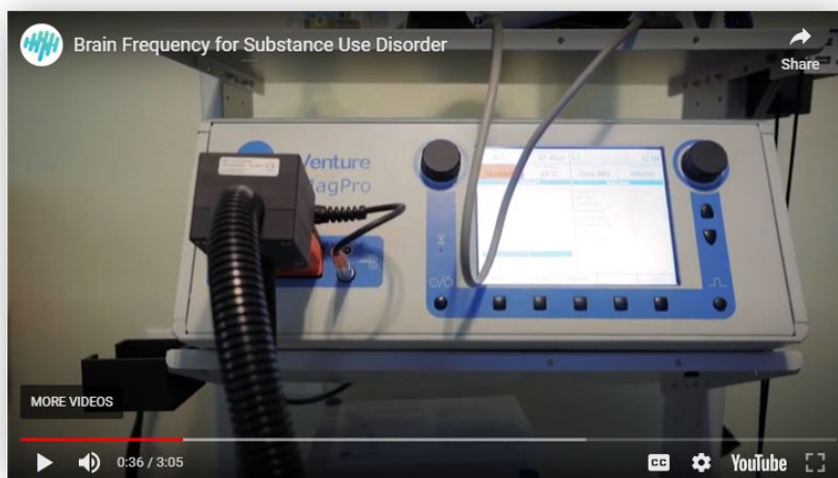
The MagPro X100 is a high performance magnetic stimulator designed primarily for research. It can provide both biphasic and monophasic pulse waveforms, electronically reverse current direction, complex pulse firing patterns, and high frequency stimulation up to 100 Hz. The device allows for storage of multiple stimulator setups, external control, and heat tolerance when performing intense, focused, and repeated protocols. Supports all clinical protocols, research, and diagnostic usage.

Contact
Website: www.magventure.com
Email: info@magventure.com

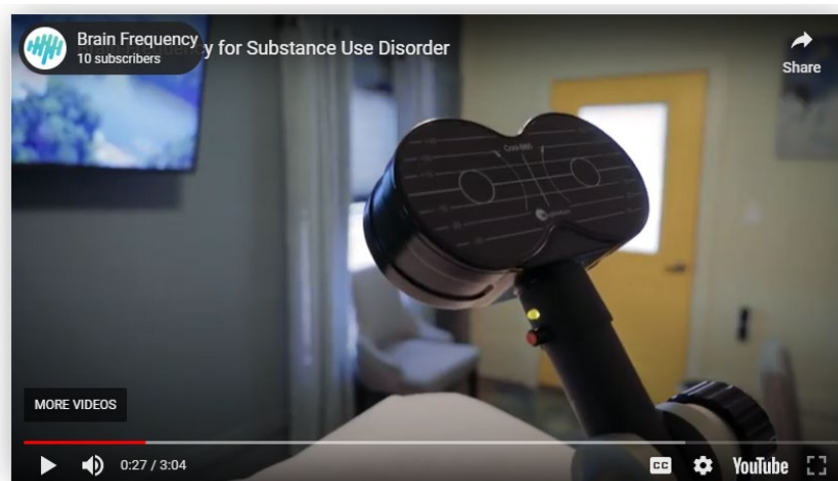
Max repetition rate	100 pps, 250 pps	Pulse mode	Standard
Waveform	Biphasic, Monophasic, Biphasic Burst (Theta Burst)	Current direction	Normal, Reverse
Ramp up	Yes		
Intended use			
<p>Diagnostic Use: The MagPro X100 is intended as an electro-physiological aid to assess diagnosis and to monitor diseases of the central and peripheral nervous system, based on the use of Motor Evoked Potentials (MEP). Therapeutic Use: Treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from two prior antidepressant medications, at or above the minimal effective dose and duration in the current episode.</p>			
Mechanical Data			
HxWxD	210x530x400 mm/ 8.3x20.9x15.7 in		
Weight	MagOption: 130 x 530 x 400mm/5.1x20.8x15.7 Stimulator: 38 kg /84 lbs MagOption: 28kg/62lbs		
Environmental Data			
Operating temperature	10-30°C/50-86°F		
Storage temperature	5-50°C/41-122°F		
Operating humidity	30-60% RH		
Storage humidity	20-80% RH		
Power Supply			
Mains voltage	230V~50/60 Hz according to IEC 60601-1		
Maximum power consumption	2700 VA, operation from 100V~ or 120V~ through transformer		
Ordering number			
9016E0711			

MagPro X100 Product Information Sheet, 03/23/2023.

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US 8,926,490, Claim 1 Infringing Activity

"Brain Frequency for Substance Use Disorder" video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.



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Cool-B65

A butterfly-shaped coil, with active cooling, for focused stimulation, designed for protocols that require a very high number of stimuli. Optimized for high repetition rates and long pulse trains. Cooled by an external Cooler Unit. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016ED491	Butterfly	Active cooling	No

Outer dimensions 172 x 92 mm / 6.8 x 3.6 in.

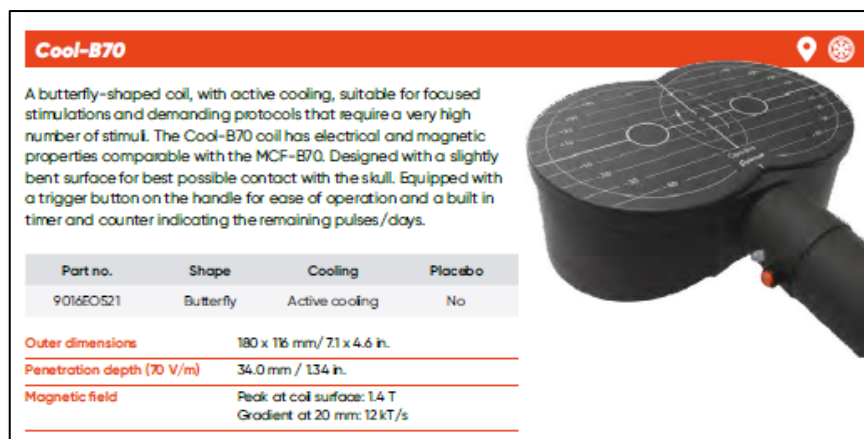
Penetration depth (70 V/m) 31.5 mm / 1.24 in.

Magnetic field Peak at coil surface: 1.4 T
Gradient at 20 mm: 9 kT/s

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US 8,926,490, Claim 1 Infringing Activity

MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

Customer websites also describe application of frequencies (magnetic fields) to the head of a subject. See screenshots, *supra*, from <https://brainfrequencydallas.com/welcome1>, <https://energy4lifecenters.com/brain-health/>, <https://thebiomedcenter.com/>

a) a non-transitory computer readable medium containing a subject data value comprising

- i) a first intrinsic frequency of a brain of the subject within a specified EEG band,**
- ii) a Q-factor of the first intrinsic frequency,**
- iii) a coherence value of a second intrinsic frequency and a third intrinsic frequency, wherein the second and third intrinsic frequencies are from two different sites in the brain of the subject within the specified EEG band, or**

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms a non-transitory computer readable medium containing a subject data value comprising a first intrinsic frequency of a brain of the subject within a specified EEG band.

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

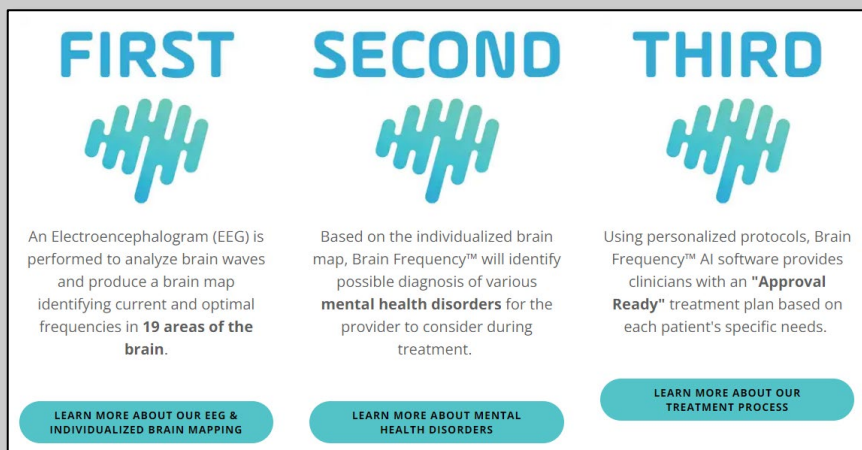
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<https://brainfrequency.ai/why-are-we-different%3F-1>

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US 8,926,490, Claim 1 Infringing Activity

iv) an EEG phase between two sites in the brain of the subject of a specified EEG frequency, wherein the two sites are different; and



<https://brainfrequency.ai/why-are-we-different%3F-1>

Customer websites confirm the use of systems that include non-transitory computer readable medium containing subject data values (e.g., brain mapping,” and “brain optimization”). See screenshots, *supra*, from <https://brainfrequencydallas.com/welcome1>, <https://energy4lifecenters.com/brain-health/>, <https://thebiomedcenter.com/>

b) a processor configured to control the magnetic field based on said subject data value, wherein the magnetic field is configured to

i) move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field,

ii) move the Q-factor of the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using the magnetic field,

Information appearing on Brain Frequency’s website and on customer websites using the Brain Frequency technology confirms a processor configured to control the magnetic field based on said subject data value, wherein the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.

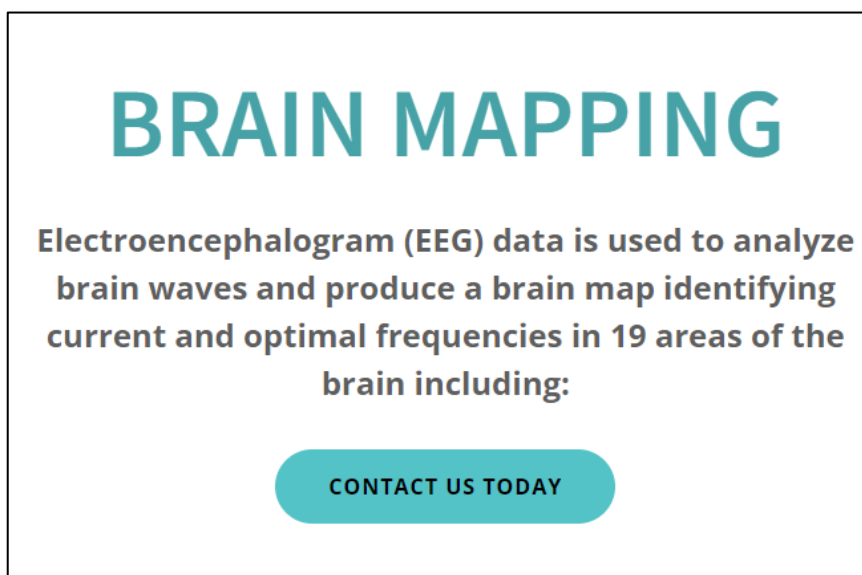


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US 8,926,490, Claim 1

iii) move the coherence value by applying the magnetic field and a second magnetic field that is asynchronous with the magnetic field close to the head of the subject and reducing the coherence value, or by applying the magnetic field and the second magnetic field that is synchronized with the magnetic field close to the head of the subject and raising the coherence value, or iv) move the EEG phase of the specified EEG frequency, wherein the magnetic field comprises a first magnetic field that is in-phase with the second magnetic field or a first magnetic field that is out of phase with the second magnetic field; and

Infringing Activity

<https://brainfrequency.ai/why-are-we-different%3F-1>

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
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You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

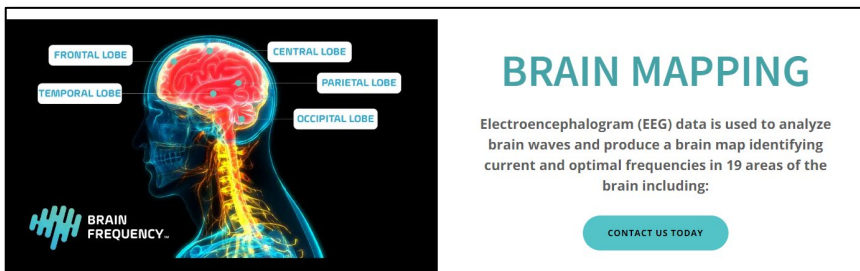
Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 1 Infringing Activity

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

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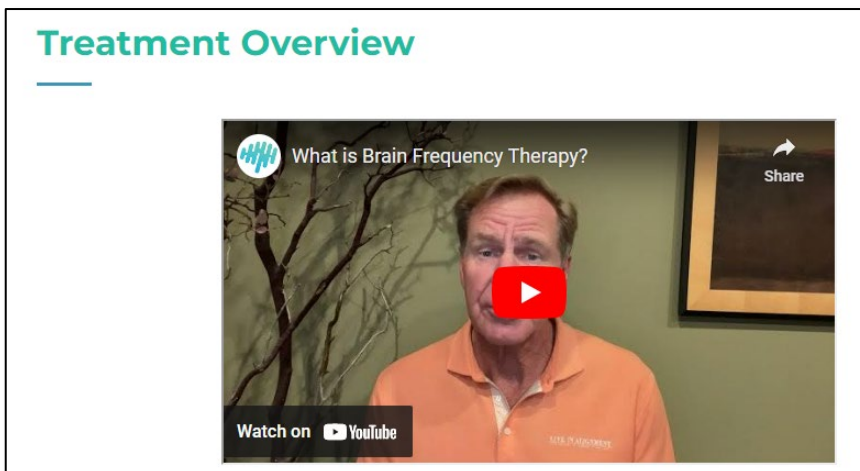


BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:


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<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>



Treatment Overview

What is Brain Frequency Therapy?

Watch on  YouTube

Share

“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

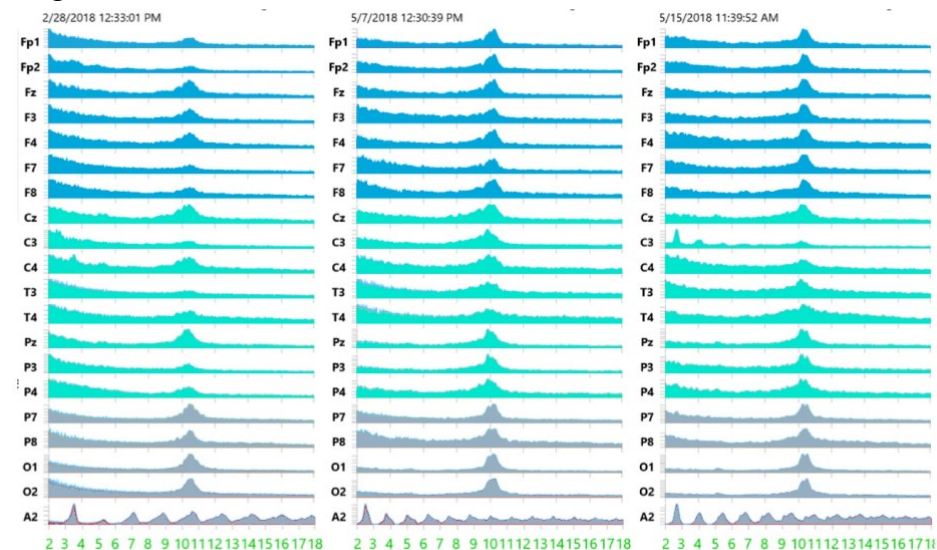
“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 1 Infringing Activity

Customer websites confirm the use of systems that include a processor configured to control the magnetic field based on said subject data value, (e.g., “brain mapping,” and “brain optimization”). See screenshots, *supra*, from <https://brainfrequencydallas.com/welcome1>, <https://energy4lifecenters.com/brain-health/>, <https://thebiomedcenter.com/>

The Brain Frequency Center website confirms that the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.



<https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd>

In a podcast, Brain Frequency founder and member Shannon Malish further confirms that the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.

See, e.g., Gladden Longevity Podcast, Nov. 2022, “Is this how you fix your brain once and for all?” (in which Ms. Malish explains the development of and treatment of patients using Brain Frequency’s techniques) (available at <https://gladdenlongevitypodcast.com/episodes>, and <https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fix-your-brain-once-and-for-all> and <https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34fadb30054a80>)

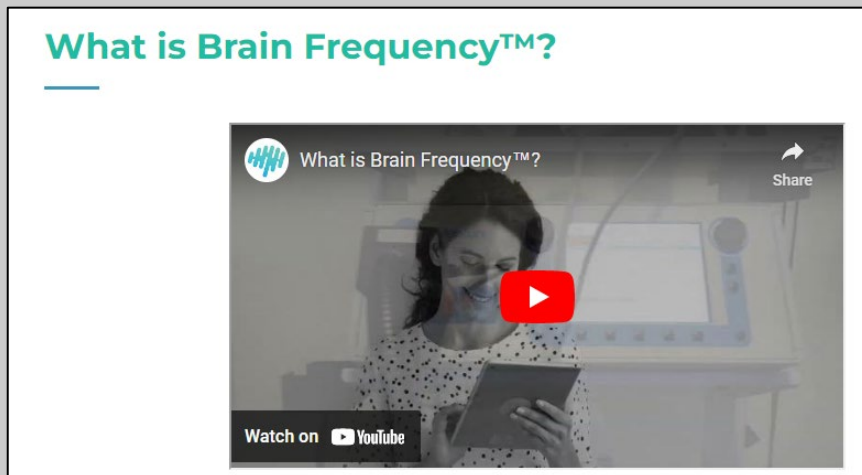
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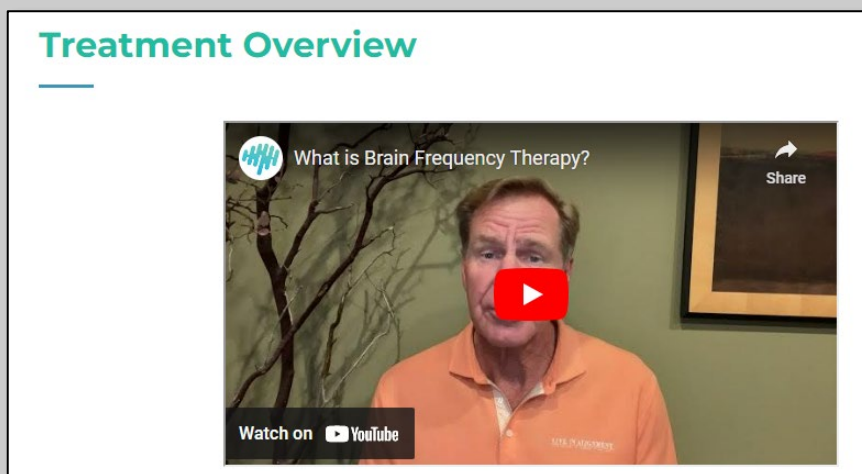
wherein the magnetic field increases the blood flow of a cortex of the brain or decreases the blood flow of a lower region of the brain.

Infringing Activity

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms a magnetic field increases blood flow of a cortex of the brain or decreases the blood flow of a lower region of the brain.



<https://brainfrequency.ai/overview>



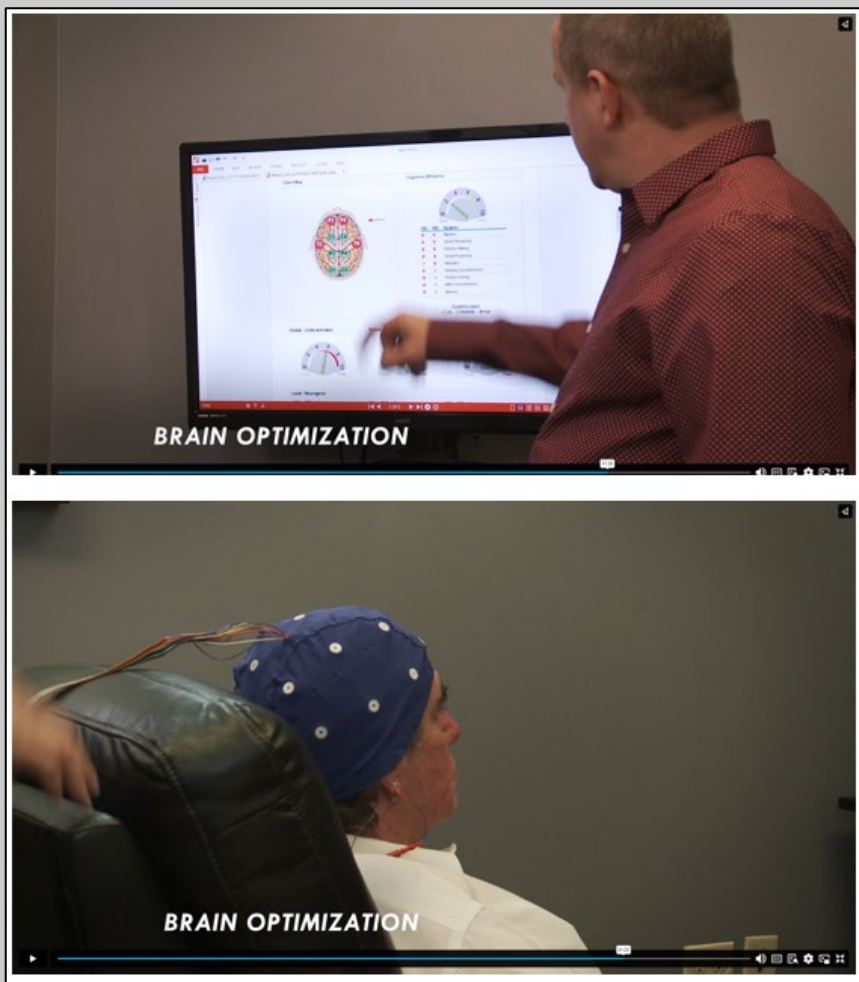
“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

Customer websites confirm the use of systems that include wherein the magnetic field increases the blood flow of a cortex of the brain or decreases the blood flow of a lower region of the brain, (e.g., “brain mapping,” and “brain optimization”).

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US 8,926,490, Claim 1 **Infringing Activity**



https://thebiomedcenter.com/about/#loc_slide1

See screenshots, *supra*, from
<https://brainfrequencydallas.com/welcome1>.
<https://energy4lifecenters.com/brain-health/>
<https://thebiomedcenter.com/>

US 8,926,490, Claim 8

The system of claim 1, further comprising logic configured to automatically change the intrinsic frequency in response to EEG

Infringing Activity

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms a processor configured to automatically change the intrinsic frequency in response to EEG readings of a subject during treatment.

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 8
readings of a subject
during treatment.

Infringing Activity

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

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<https://brainfrequency.ai/why-are-we-different%3F-1>

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<https://brainfrequency.ai/eeg-%26-assessments>

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US 8,926,490, Claim 8**Infringing Activity**

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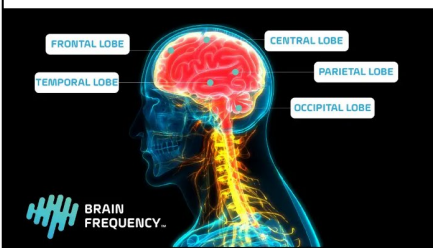
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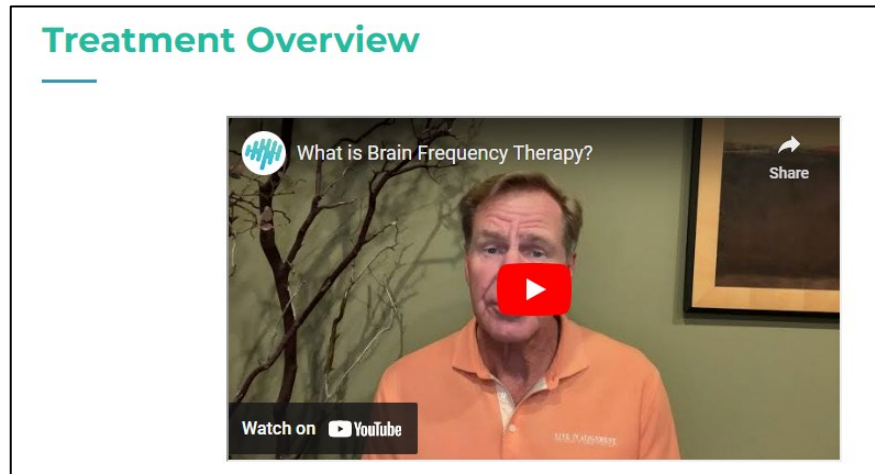
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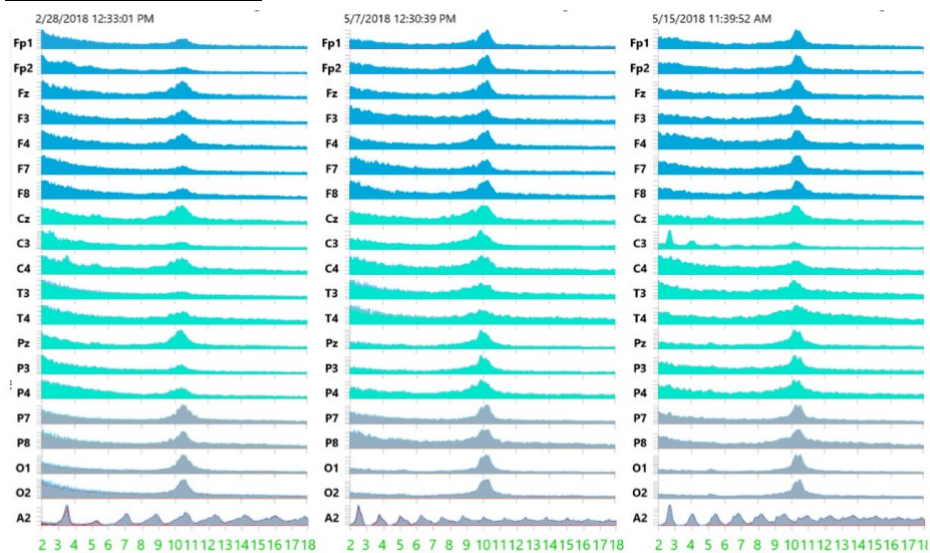
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US 8,926,490, Claim 9**Infringing Activity**

The system of claim 1, further comprising logic configured to calculate the subject data value from EEG data collected from the subject.

Information appearing on Brain Frequency’s website and on customer websites using the Brain Frequency technology confirms logic configured to calculate the subject data value from EEG data collected from the subject.

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 9**Infringing Activity**

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<https://brainfrequency.ai/eeg-%26-assessments>

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US 8,926,490, Claim 9**Infringing Activity**

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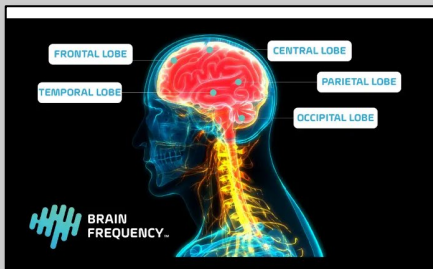
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<https://brainfrequency.ai/patient-faqs>

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>



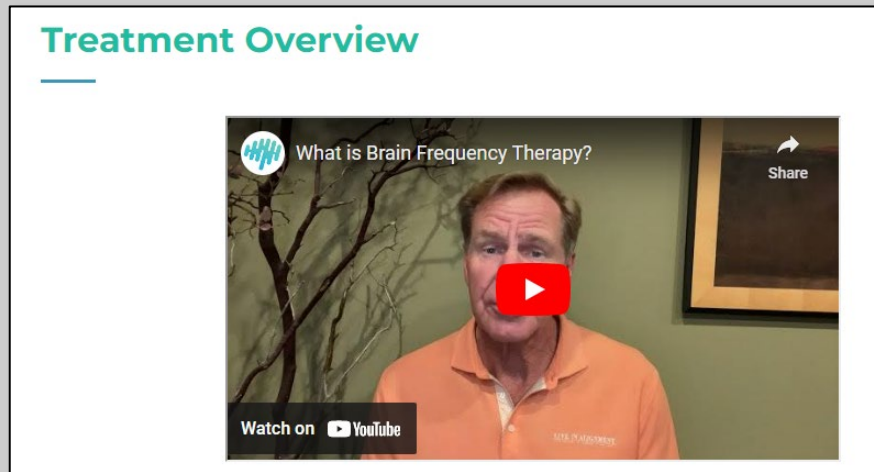
BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 9 Infringing Activity

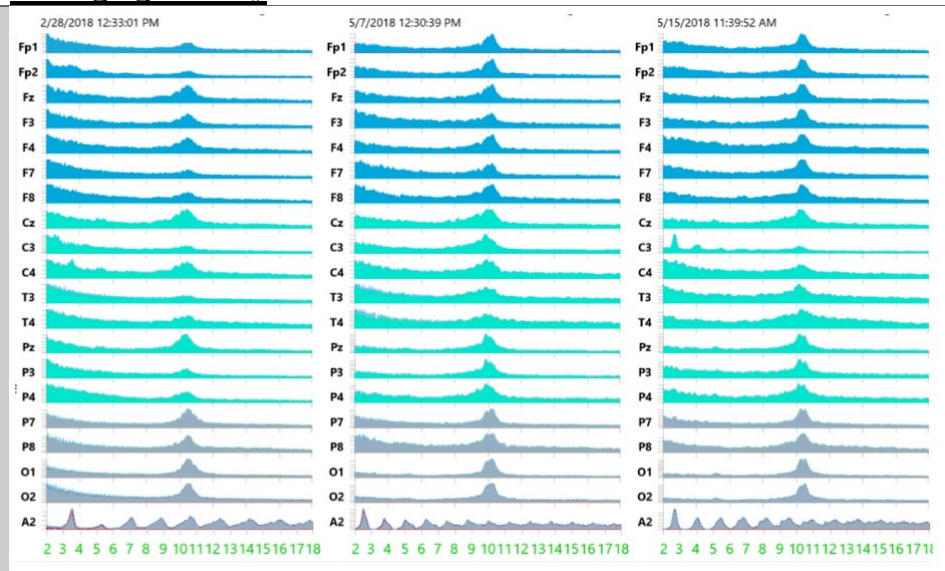
“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

Customer websites confirm logic configured to calculate the subject data value from EEG data collected from the subject (e.g., “brain mapping,” and “brain optimization”). See screenshots, *supra*, from
<https://brainfrequencydallas.com/welcome1>,
<https://energy4lifecenters.com/brain-health/>
<https://thebiomedcenter.com/>

The Brain Frequency Center website confirms logic configured to calculate the subject data value from EEG data collected from the subject.

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 9**Infringing Activity**

<https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd>

US 8,926,490, Claim 10**Infringing Activity**

The system of claim 1, further comprising: (a) a first electrode operable to detect electrical brain activity; and (b) a second electrode operable to detect a reference signal; wherein the first electrode is adapted to be located on the subject in at least one of: an area of low electrical resistivity on said subject, and an area with substantially no electrical impulse interference on said subject, and wherein the second electrode is adapted to be located on the subject.

Information appearing on Brain Frequency's website confirms a first electrode operable to detect electrical brain activity; and (b) a second electrode operable to detect a reference signal; wherein the first electrode is adapted to be located on the subject in at least one of: an area of low electrical resistivity on said subject, and an area with substantially no electrical impulse interference on said subject, and wherein the second electrode is adapted to be located on the subject.

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 10 Infringing Activity

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 10 Infringing Activity

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
- **Treatment #1:** Details on the treatment process, Q&A; about 45 min.
- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

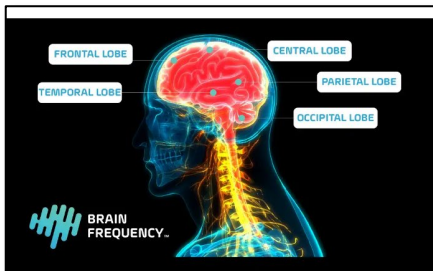
You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>



BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

[CONTACT US TODAY](#)

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

Exhibit 5 to Second Amended Complaint

US 10,029,111

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 1

A method of improving a physiological condition or a neuropsychiatric condition of a mammal which comprises

Infringing Activity

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai), on the TMS manufacturer's website and product sheets, and on customer websites regarding using the Brain Frequency technology confirms that Defendant induces the infringing use by customers of a method of improving a physiological condition or a neuropsychiatric condition according to claim 1.²

BRAIN HEALTH & WELLNESS

MENTAL HEALTH DISORDERS

- Trauma & Stressor-Related
- Impulse Control & Conduct
- Schizophrenia & Psychotic
- Obsessive-Compulsive
- Substance & Addictive
- Neurodevelopmental
- Somatic Symptom
- Feeding & Eating
- Neurocognitive
- Dissociative
- Sleep-Wake
- Personality
- Depressive
- Anxiety
- Bipolar
- ADHD
- PTSD

<https://brainfrequency.ai/overview>

² The Brain Frequency website lists "locations" in four states: Gladden Longevity in Texas (<https://www.gladdenlongevity.com/> and <https://brainfrequencydallas.com/>), Live In Alignment in California (<https://www.liveinalignment.org/>), BioMed Scottsdale in Arizona (<https://thebiomedcenter.com/>), and Energy4Life Centers in Utah (<https://energy4lifecenters.com/>).

Exhibit 5 to Second Amended Complaint

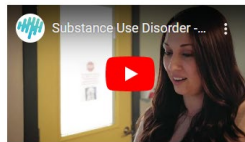
US 10,029,111, Claim 1 Infringing Activity**PREDICTIVE DIAGNOSTICS**

Brain Frequency™ AI software's predictive and diagnostic analytics, assists healthcare professionals by improving diagnosis efficiency, treatment accuracy, and patient experience.

Our proprietary science-based technology and individualized treatment protocols, help to improve brain health and wellness by decreasing or eliminating symptoms of trauma related conditions and various mental health disorders. The Brain Frequency™ system promotes optimum brain functioning across cognitive, sensory, social-emotional, behavioral, and motor domains.



<https://brainfrequency.ai/why-are-we-different%3F-1#8ee53a4-5885-4b67-9b4c-1f504d8f9653>

SUBSTANCE USE DISORDERS

Substance abuse affects the frontal cortex of the brain controlling judgement and impulsivity. Data analysis has determined those who chronically relapse have little to no movement in this area. After Brain Frequency treatments, patients experienced functional improvement of the frontal cortex resulting in a 28% increase in continued abstinence.

<https://brainfrequency.ai/why-are-we-different%3F-1#8ee53a4-5885-4b67-9b4c-1f504d8f9653>

Patient: "Jason"**Valid Psychometric Assessments****Subjective**

Assessments	02/09/2022	02/22/2022	03/09/2022
Executive Functioning Scale	43	31	11
Anxiety	20	14	6
Depression	38	38	12
Brain Body Connection	29	15	8
Sleep	17	6	0
Post Trauma	58	22	6
Concussion Symptoms	65	47	33
Cravings	4	0	0
Obsessive Thoughts & Behaviors	37	23	11

* Higher number represents more severe symptoms

SEVERE

MILD

NORMAL

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 1 **Infringing Activity**

<https://brainfrequency.ai/overview>

How do I know if I can integrate Brain Frequency™ into my clinic?

Since Brain Frequency™ is able to treat a wide array of mental health, neurological disorders, and cognitive functioning, we've separated our abilities into two distinct practices. One is for mental health and medical practitioners to treat DSM-5 diagnosable issues like depression, bipolar disorder, concussions, and the like. The other is for functional medicine and wellness, used to treat things like general sleep issues, mental fog, trouble with short term memory, tinnitus, etc. You can see more about this distinction on the Affiliate Program page.

<https://brainfrequency.ai/provider-faqs-1>

Brain Frequency™: A Ground-Breaking Therapeutic Approach to Your Brain's Possible Best

Brain Frequency™ identifies the optimal operating frequency unique to your brain, and identifies those areas functioning below optimal frequency. Using this brain mapping information, the Brain Frequency™ software predicts mental health, neurological, and cognitive disorders, and will immediately recommend a treatment protocol.

HOW IT WORKS

STEP 1



Brain Mapped

Your brain is mapped with an EEG, then your brain waves are analyzed to produce a personalized brain map identifying current and optimal frequencies in 19 areas of your brain.

STEP 2



Predictive Diagnostics

Based on your brain map and self-reporting, Brain Frequency™ AI identifies the possible mental health, neurological, and/or cognitive diagnoses and opportunities to create your personalized brain frequency protocols.

STEP 3



Personalized Plan

Your brain map and treatment plan will be presented to you. The treatment course and the number will depend on what your brain needs. Your progress will be mapped with additional EEG(s).

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequencydallas.com/welcome1>

Customer websites confirm that they use the Brain Frequency technology and methods. See screenshots, *supra*, from

<https://brainfrequencydallas.com/welcome1>.

<https://energy4lifecenters.com/brain-health/>

<https://thebiomedcenter.com/>

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 1 Infringing Activity

subjecting the mammal to repetitive transcranial magnetic stimulation (rTMS)

Information appearing on Brain Frequency's website, on an affiliate's website using the Brain Frequency technology, and on the TMS manufacturer's website confirm that a human is subjected to rTMS.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

<https://brainfrequency.ai/patient-faqs>

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequency.ai/patient-faqs>

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability. Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

<https://brainfrequency.ai/affiliate-program>

Exhibit 5 to Second Amended Complaint



US 10,029,111, Claim 1 Infringing Activity**Is the equipment safe?**

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

<https://brainfrequency.ai/provider-faqs-1>

What is Brain Frequency™?

<https://brainfrequency.ai/overview>

MAGPRO X100
Biphasic, Monophasic, Biphasic Burst (Theta Burst)

The MagPro X100 is a high performance magnetic stimulator designed primarily for research. It can provide both biphasic and monophasic pulse waveforms, electronically reverse current direction, complex pulse firing patterns, and high frequency stimulation up to 100 Hz. The device allows for storage of multiple stimulator setups, external control, and heat tolerance when performing intense, focused, and repeated protocols. Supports all clinical protocols, research, and diagnostic usage.

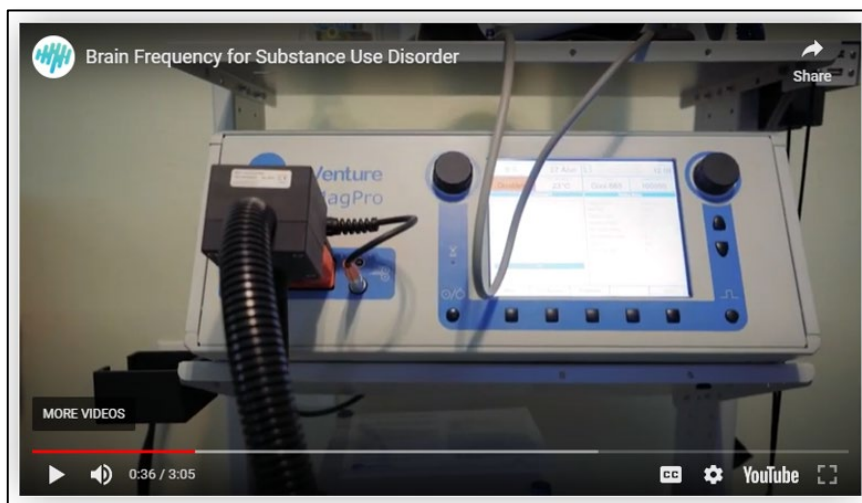
Contact
Website: www.magventure.com
Email: info@magventure.com

Max repetition rate	100 pps, 250 pps	Pulse mode	Standard
Waveform	Biphasic, Monophasic, Biphasic Burst (Theta Burst)	Current direction	Normal, Reverse
Ramp up	Yes		
Intended use			
<p>Diagnostic Use: The MagPro X100 is intended as an electro-physiological aid to assess diagnosis and to monitor diseases of the central and peripheral nervous system, based on the use of Motor Evoked Potentials (MEP). Therapeutic Use: Treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from two prior antidepressant medications, at or above the minimal effective dose and duration in the current episode.</p>			
Mechanical Data			
HxWxD	210x530x400 mm/ 8.3x20.9x15.7 in		
	MagOption: 130 x 530 x 400mm/5.1x20.8x15.7		
Weight	Stimulator: 39 kg/84 lbs		
	MagOption: 28kg/62lbs		
Environmental Data			
Operating temperature	10-30°C/50-86°F		
Storage temperature	5-50°C/41-122°F		
Operating humidity	30-60% RH		
Storage humidity	20-80% RH		
Power Supply			
Mains voltage	230V~50/60 Hz according to IEC 60601-1		
Maximum power consumption	2700 VA, operation from 100V~ or 120V~ through transformer		
Ordering number			
9016E0711			

MagPro X100 Product Information Sheet, 03/23/2023.

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 1 Infringing Activity



“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page:

<https://www.youtube.com/watch?v=ZT4CgJxgb5c>.



“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page:

<https://www.youtube.com/watch?v=ZT4CgJxgb5c>.

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 1 Infringing Activity

Cool-B65

A butterfly-shaped coil, with active cooling, for focused stimulation, designed for protocols that require a very high number of stimuli. Optimized for high repetition rates and long pulse trains. Cooled by an external Cooler Unit. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016E0491	Butterfly	Active cooling	No

Outer dimensions: 172 x 92 mm / 6.8 x 3.6 in.
 Penetration depth (70 V/m): 31.5 mm / 1.24 in.
 Magnetic field: Peak at coil surface: 1.4 T
 Gradient at 20 mm: 9 kT/s



MagVenture, 2022 Product Catalog, p. 30.

Cool-B70

A butterfly-shaped coil, with active cooling, suitable for focused stimulations and demanding protocols that require a very high number of stimuli. The Cool-B70 coil has electrical and magnetic properties comparable with the MCF-B70. Designed with a slightly bent surface for best possible contact with the skull. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016E0521	Butterfly	Active cooling	No

Outer dimensions: 180 x 116 mm / 7.1 x 4.6 in.
 Penetration depth (70 V/m): 34.0 mm / 1.34 in.
 Magnetic field: Peak at coil surface: 1.4 T
 Gradient at 20 mm: 12 kT/s



MagVenture, 2022 Product Catalog, p. 33.

Customer websites confirm that they use the Brain Frequency technology and methods. See screenshots, *supra*, from <https://brainfrequencydallas.com/welcome1>, <https://energy4lifecenters.com/brain-health/>, <https://thebiomedcenter.com/>

at a frequency of a non-EEG biological metric, or an harmonic or sub-harmonic of said non-EEG biological metric,

Information appearing on the Brain Frequency website confirms at a frequency of a non-EEG biological metric, or an harmonic or sub-harmonic of said non-EEG biological metric.

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 1 Infringing Activity**How Can Brain Frequency™ Benefit My Practice?**

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability. Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

<https://brainfrequency.ai/affiliate-program>

Treatment Overview

“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

A patent application that names Shannon Malish, founder and member of Brain Frequency as an inventor (Appl. No.: 17/811,053; Pub. No. US 2022/0355125 A1; the “125 Publication”) confirms at a frequency of a non-EEG biological metric, or an harmonic or sub-harmonic of said non-EEG biological metric.

“Specifically, a Target Frequency is an Alpha wave frequency at which a subject's brain should be operating optimally in maximum of the EEG channels when functioning normally. A Target Frequency may be about 7 Hz-13 Hz, about 8-12 Hz, about 9-11 Hz, or the like. Optionally, the

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 1 Infringing Activity

Target Frequency for a subject may be determined by taking the average PSD values across all EEG channels and aligning this average with the nearest Heart Rate Frequency (as discussed below with respect to FIGS. 9A and 9B).” ’125 Publication, paragraph [0036].

“As such the treatment protocols are determined to move the Homeostatic frequency 903 (and/or the Greatest Frequency of each channel) towards the Target Frequency 904. Optionally, a heart rate artifact (902) may be observed and discarded if the peak frequencies for all or substantially all of the channels are aligned with a heart rate peak. Such heart rate artifacts may be indicative of a strong heartrate that appears to be overtaking the EEG.” ’125 Publication, paragraph [0171].

“Similarly, in FIG. 9B two homeostatic frequencies 914 (about 8.5 Hz) and 916 (about 10.9) are observed which are between 8-12 Hz. As such, the Target Frequency is determined as the heart rate peak 916 (e.g., about 9.5 Hz) that lies between 914 and 916.” ’125 Publication, paragraph [0172].

“This new treatment protocol continues for two rounds of 10 treatments which may include adjustment in the frequency depending on the EEG and alignment of all leads with the heart rate (A2 lead). On this protocol, only one treatment occurs over 24 hours.” ’125 Publication, paragraph [0184].

wherein the mammal is a human.

Information appearing on Brain Frequency’s website and on customer websites using the Brain Frequency technology confirms human subjects.



<https://brainfrequency.ai/overview>

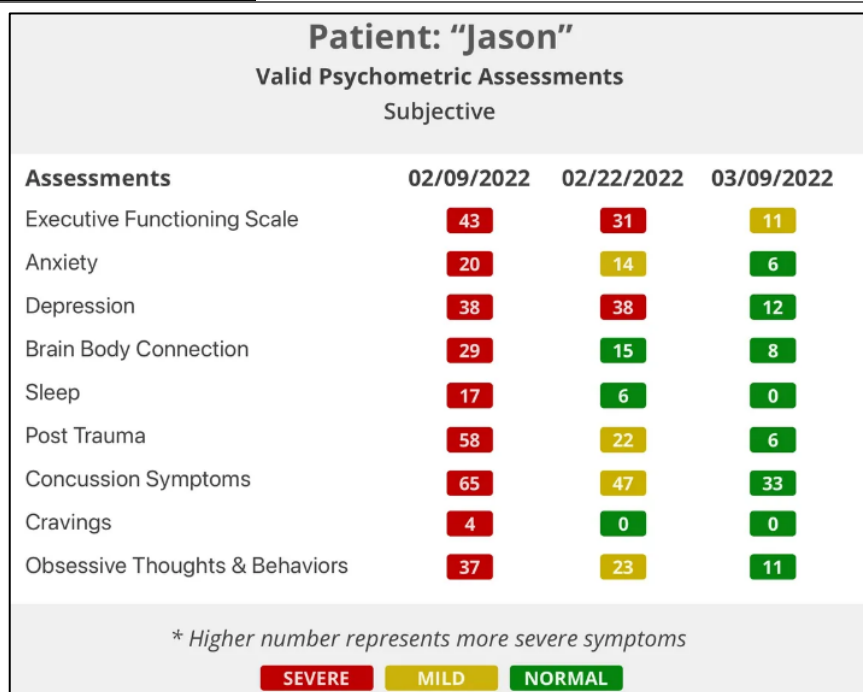
Exhibit 5 to Second Amended Complaint

<u>US 10,029,111, Claim 1</u>	<u>Infringing Activity</u>
	Customer websites confirm that they use the Brain Frequency technology and methods. See screenshots, <i>supra</i> , from https://brainfrequencydallas.com/welcome1 , https://energy4lifecenters.com/brain-health/ , https://thebiomedcenter.com/
<u>US 10,029,111, Claim 2</u>	<u>Infringing Activity</u>
The method of claim 1 wherein the non-EEG biological metric is heart rate, respiratory rate, gastrointestinal movement rate.	<p>The '125 Publication confirms the non-EEG biological metric is heart rate, respiratory rate, gastrointestinal movement rate.</p> <p>“Specifically, a Target Frequency is an Alpha wave frequency at which a subject's brain should be operating optimally in maximum of the EEG channels when functioning normally. A Target Frequency may be about 7 Hz-13 Hz, about 8-12 Hz, about 9-11 Hz, or the like. Optionally, the Target Frequency for a subject may be determined by taking the average PSD values across all EEG channels and aligning this average with the nearest Heart Rate Frequency (as discussed below with respect to FIGS. 9A and 9B).” '125 Publication, paragraph [0036].</p> <p>“As such the treatment protocols are determined to move the Homeostatic frequency 903 (and/or the Greatest Frequency of each channel) towards the Target Frequency 904. Optionally, a heart rate artifact (902) may be observed and discarded if the peak frequencies for all or substantially all of the channels are aligned with a heart rate peak. Such heart rate artifacts may be indicative of a strong heartrate that appears to be overtaking the EEG.” '125 Publication, paragraph [0171].</p> <p>“Similarly, in FIG. 9B two homeostatic frequencies 914 (about 8.5 Hz) and 916 (about 10.9) are observed which are between 8-12 Hz. As such, the Target Frequency is determined as the heart rate peak 916 (e.g., about 9.5 Hz) that lies between 914 and 916.” '125 Publication, paragraph [0172].</p> <p>“This new treatment protocol continues for two rounds of 10 treatments which may include adjustment in the frequency depending on the EEG and alignment of all leads with the heart rate (A2 lead). On this protocol, only one treatment occurs over 24 hours.” '125 Publication, paragraph [0184].</p>
<u>US 10,029,111, Claim 3</u>	<u>Infringing Activity</u>
The method of claim 1 wherein the rTMS frequency is equal to,	The '125 Publication confirms the rTMS frequency is equal to, or a harmonic or sub-harmonic of, a non-EEG biological metric that is closest to an intrinsic frequency in a desired EEG band.

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 3 or a harmonic or sub-harmonic of, a non-EEG biological metric that is closest to an intrinsic frequency in a desired EEG band.	<u>Infringing Activity</u> <p>“Specifically, a Target Frequency is an Alpha wave frequency at which a subject's brain should be operating optimally in maximum of the EEG channels when functioning normally. A Target Frequency may be about 7 Hz-13 Hz, about 8-12 Hz, about 9-11 Hz, or the like. Optionally, the Target Frequency for a subject may be determined by taking the average PSD values across all EEG channels and aligning this average with the nearest Heart Rate Frequency (as discussed below with respect to FIGS. 9A and 9B).” ’125 Publication, paragraph [0036].</p> <p>“This new treatment protocol continues for two rounds of 10 treatments which may include adjustment in the frequency depending on the EEG and alignment of all leads with the heart rate (A2 lead). On this protocol, only one treatment occurs over 24 hours.” ’125 Publication, paragraph [0184].</p>
US 10,029,111, Claim 4 The method of claim 3 wherein the non-EEG biological metric is heart rate.	<u>Infringing Activity</u> <p>The ’125 Publication confirms the non-EEG biological metric is heart rate.</p> <p>“Specifically, a Target Frequency is an Alpha wave frequency at which a subject's brain should be operating optimally in maximum of the EEG channels when functioning normally. A Target Frequency may be about 7 Hz-13 Hz, about 8-12 Hz, about 9-11 Hz, or the like. Optionally, the Target Frequency for a subject may be determined by taking the average PSD values across all EEG channels and aligning this average with the nearest Heart Rate Frequency (as discussed below with respect to FIGS. 9A and 9B).” ’125 Publication, paragraph [0036].</p>
US 10,029,111, Claim 5 The method of claim 1 wherein the physiological condition is concentration, sleep, alertness, memory, blood pressure, stress, libido, speech, motor function, physical performance, cognitive function, intelligence, height or weight.	<u>Infringing Activity</u> <p>Information appearing on Brain Frequency’s website confirms the physiological condition is concentration, sleep, alertness, memory, blood pressure, stress, libido, speech, motor function, physical performance, cognitive function, intelligence, height or weight.</p>

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 5 Infringing Activity

<https://brainfrequency.ai/overview>

US 10,029,111, Claim 6 Infringing Activity

The method of claim 1 wherein the neuropsychiatric condition is Autism Spectrum Disorder (ASD), Alzheimer's disease, ADHD, schizophrenia, anxiety, depression, coma, Parkinson's disease, substance abuse, bipolar disorder, a sleep disorder, an eating disorder, tinnitus, traumatic brain injury, post traumatic stress syndrome, chronic pain or fibromyalgia.

Information appearing on Brain Frequency's website and customer websites confirms the neuropsychiatric condition is Autism Spectrum Disorder (ASD), Alzheimer's disease, ADHD, schizophrenia, anxiety, depression, coma, Parkinson's disease, substance abuse, bipolar disorder, a sleep disorder, an eating disorder, tinnitus, traumatic brain injury, post traumatic stress syndrome, chronic pain or fibromyalgia.

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 6 Infringing Activity**BRAIN HEALTH & WELLNESS****MENTAL HEALTH DISORDERS**

- Trauma & Stressor-Related
- Impulse Control & Conduct
- Schizophrenia & Psychotic
- Obsessive-Compulsive
- Substance & Addictive
- Neurodevelopmental
- Somatic Symptom
- Feeding & Eating
- Neurocognitive
- Dissociative
- Sleep-Wake
- Personality
- Depressive
- Anxiety
- Bipolar
- ADHD
- PTSD

<https://brainfrequency.ai/overview>

PREDICTIVE DIAGNOSTICS

Brain Frequency™ AI software's predictive and diagnostic analytics, assists healthcare professionals by improving diagnosis efficiency, treatment accuracy, and patient experience.

Our proprietary science-based technology and individualized treatment protocols, help to improve brain health and wellness by decreasing or eliminating symptoms of trauma related conditions and various mental health disorders. The Brain Frequency™ system promotes optimum brain functioning across cognitive, sensory, social-emotional, behavioral, and motor domains.



<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 6 Infringing Activity**SUBSTANCE USE DISORDERS**

Substance abuse affects the frontal cortex of the brain controlling judgement and impulsivity. Data analyzation has determined those who chronically relapse have little to no movement in this area. After Brain Frequency treatments, patients experienced functional improvement of the frontal cortex resulting in a 28% increase in continued abstinence.

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

Patient: "Jason"**Valid Psychometric Assessments****Subjective**

Assessments	02/09/2022	02/22/2022	03/09/2022
Executive Functioning Scale	43	31	11
Anxiety	20	14	6
Depression	38	38	12
Brain Body Connection	29	15	8
Sleep	17	6	0
Post Trauma	58	22	6
Concussion Symptoms	65	47	33
Cravings	4	0	0
Obsessive Thoughts & Behaviors	37	23	11

** Higher number represents more severe symptoms*

SEVERE**MILD****NORMAL**

<https://brainfrequency.ai/overview>

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 6 Infringing Activity**OUR TECHNOLOGY**

We use a range of technologies to support our treatment approach to anxiety, including EEG (electroencephalogram) neurofeedback, qEEG (quantitative electroencephalogram) brain mapping, and Brain Frequency, iTMS (individualized transcranial magnetic stimulation). These technologies allow us to measure brain activity and create customized treatment plans to improve brain function and reduce anxiety symptoms.

<https://energy4lifecenters.com/brain-health/>

US 10,029,111, Claim 7 Infringing Activity

The method of claim 3 wherein the intrinsic frequency is in the delta band (<4 Hz), the theta band (4-8 Hz), the alpha band (8-13 Hz), the beta band (13-30 Hz), the gamma band (25-100 Hz), or the Mu band (8-13 Hz).

Information appearing on Brain Frequency's website confirms the intrinsic frequency is in the delta band (<4 Hz), the theta band (4-8 Hz), the alpha band (8-13 Hz), the beta band (13-30 Hz), the gamma band (25-100 Hz), or the Mu band (8-13 Hz).

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 7 Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
- **Treatment #1:** Details on the treatment process, Q&A; about 45 min.
- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

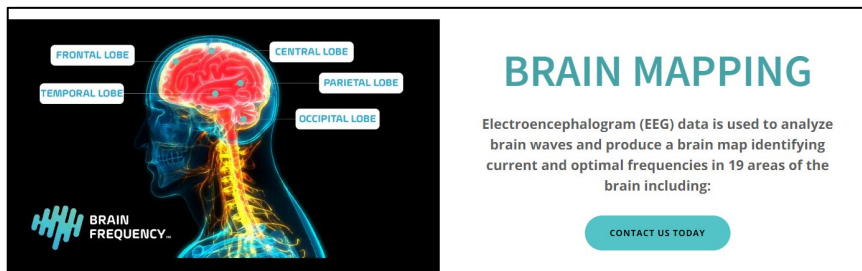
Exhibit 5 to Second Amended Complaint

US 10,029,111, Claim 7 Infringing Activity

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>



BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

[CONTACT US TODAY](#)

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

The '125 Publication confirms the intrinsic frequency is in the delta band (<4 Hz), the theta band (4-8 Hz), the alpha band (8-13 Hz), the beta band (13-30 Hz), the gamma band (25-100 Hz), or the Mu band (8-13 Hz).

“Specifically, a Target Frequency is an Alpha wave frequency at which a subject's brain should be operating optimally in maximum of the EEG channels when functioning normally. A Target Frequency may be about 7 Hz-13 Hz, about 8-12 Hz, about 9-11 Hz, or the like. Optionally, the Target Frequency for a subject may be determined by taking the average PSD values across all EEG channels and aligning this average with the nearest Heart Rate Frequency (as discussed below with respect to FIGS. 9A and 9B).” '125 Publication, paragraph [0036].

Exhibit 5 to Second Amended Complaint

US 8,465,408

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1

A method of treating Parkinson's disease, treating coma, treating post traumatic stress disorder (PTSD), treating amblyopia, and/or enhancing cognitive performance, in a subject, comprising:

Infringing Activity

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant makes, provides, sells, and induces the infringing use by customers of a method for treating PTSD in a subject according to claim 1.³



<https://brainfrequency.ai/overview>

³ The Brain Frequency website lists “locations” in four states: Gladden Longevity in Texas (<https://www.gladdenlongevity.com/> and <https://brainfrequencydallas.com/>), Live In Alignment in California (<https://www.liveinalignment.org/>), BioMed Scottsdale in Arizona (<https://thebiomedcenter.com/>), and Energy4Life Centers in Utah (<https://energy4lifecenters.com/>).

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1**Infringing Activity**

Patient: "Jason" Valid Psychometric Assessments Subjective			
Assessments	02/09/2022	02/22/2022	03/09/2022
Executive Functioning Scale	43	31	11
Anxiety	20	14	6
Depression	38	38	12
Brain Body Connection	29	15	8
Sleep	17	6	0
Post Trauma	58	22	6
Concussion Symptoms	65	47	33
Cravings	4	0	0
Obsessive Thoughts & Behaviors	37	23	11
<i>* Higher number represents more severe symptoms</i> <div> SEVERE MILD NORMAL </div>			

<https://brainfrequency.ai/overview>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1**Infringing Activity****Brain Frequency™: A Ground-Breaking Therapeutic Approach to Your Brain's Possible Best**

Brain Frequency™ identifies the optimal operating frequency unique to your brain, and identifies those areas functioning below optimal frequency. Using this brain mapping information, the Brain Frequency™ software predicts mental health, neurological, and cognitive disorders, and will immediately recommend a treatment protocol.

HOW IT WORKS

STEP 1

**Brain Mapped**

Your brain is mapped with an EEG, then your brain waves are analyzed to produce a personalized brain map identifying current and optimal frequencies in 19 areas of your brain.

STEP 2

**Predictive Diagnostics**

Based on your brain map and self-reporting, Brain Frequency™ AI identifies the possible mental health, neurological, and/or cognitive diagnoses and opportunities to create your personalized brain frequency protocols.

STEP 3

**Personalized Plan**

Your brain map and treatment plan will be presented to you. The treatment course and the number will depend on what your brain needs. Your progress will be mapped with additional EEG(s).

Are there any risks?

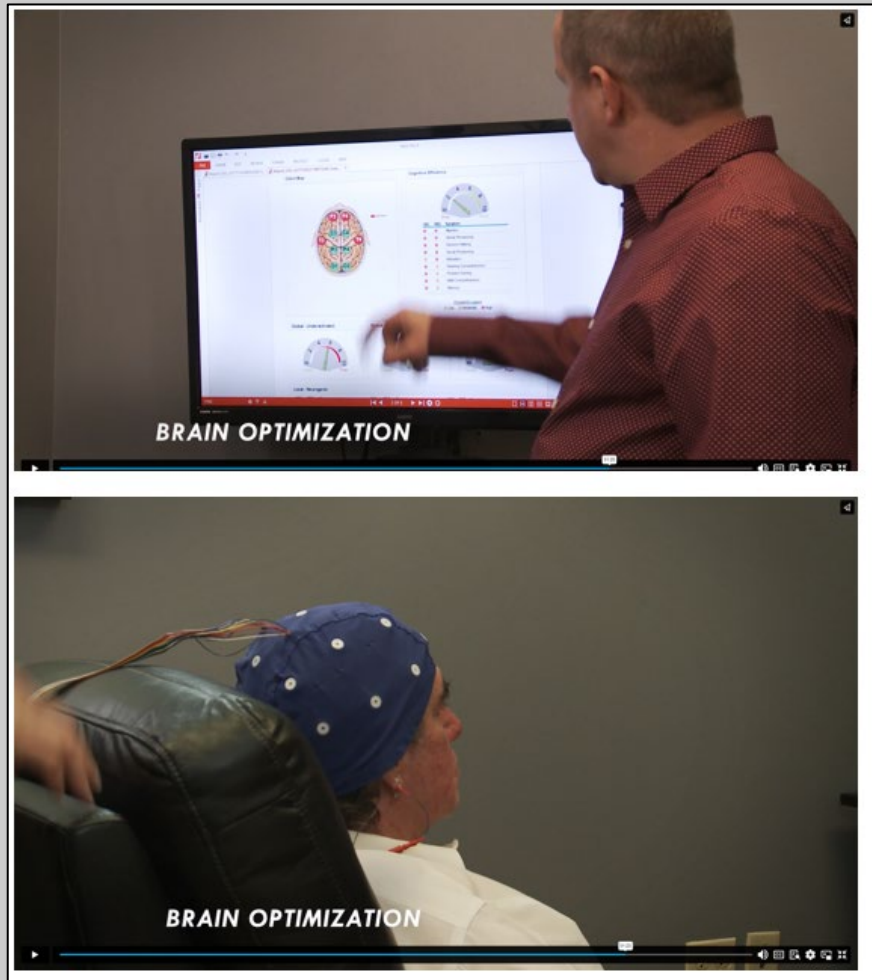
Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequencydallas.com/welcome1>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1

Infringing Activity



https://thebiomedcenter.com/about/#loc_slide1

(a) adjusting a setting of a magnetic field such that the magnetic field is configured to do one or more of the following:

Information appearing on Brain Frequency's website, and the TMS manufacturer website/product sheets confirm adjusting a setting of a magnetic field.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

<https://brainfrequency.ai/patient-faqs>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1**Infringing Activity****Are there any risks?**

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequency.ai/patient-faqs>

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability. Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

<https://brainfrequency.ai/affiliate-program>

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

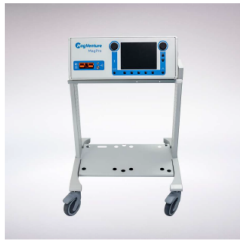
<https://brainfrequency.ai/provider-faqs-1>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1**Infringing Activity****What is Brain Frequency™?**

<https://brainfrequency.ai/overview>

MagVenture
Research. Treatment. Results.



MAGPRO X100
Biphasic, Monophasic, Biphasic Burst (Theta Burst)

The MagPro X100 is a high performance magnetic stimulator designed primarily for research. It can provide both biphasic and monophasic pulse waveforms, electronically reverse current direction, complex pulse firing patterns, and high frequency stimulation up to 100 Hz. The device allows for storage of multiple stimulator setups, external control, and heat tolerance when performing intense, focused, and repeated protocols. Supports all clinical protocols, research, and diagnostic usage.

Contact
Website: www.magventure.com
Email: info@magventure.com

Max repetition rate	100 pps, 250 pps	Pulse mode	Standard
Waveform	Biphasic, Monophasic, Biphasic Burst (Theta Burst)	Current direction	Normal, Reverse
Ramp up	Yes		

Intended use

Diagnostic Use: The MagPro X100 is intended as an electro-physiological aid to assess diagnosis and to monitor diseases of the central and peripheral nervous system, based on the use of Motor Evoked Potentials (MEP). **Therapeutic Use:** Treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from two prior antidepressant medications, at or above the minimal effective dose and duration in the current episode.

Mechanical Data

HxWxD	210x530x400 mm/ 8.3x20.9x15.7 in
Weight	MagOption: 130 x 530 x 400mm/5.1x20.8x15.7 Stimulator: 38 kg /84 lbs MagOption: 28kg/62lbs

Environmental Data

Operating temperature	10-30°C/50-86°F
Storage temperature	5-50°C/41-122°F
Operating humidity	30-60% RH
Storage humidity	20-80% RH

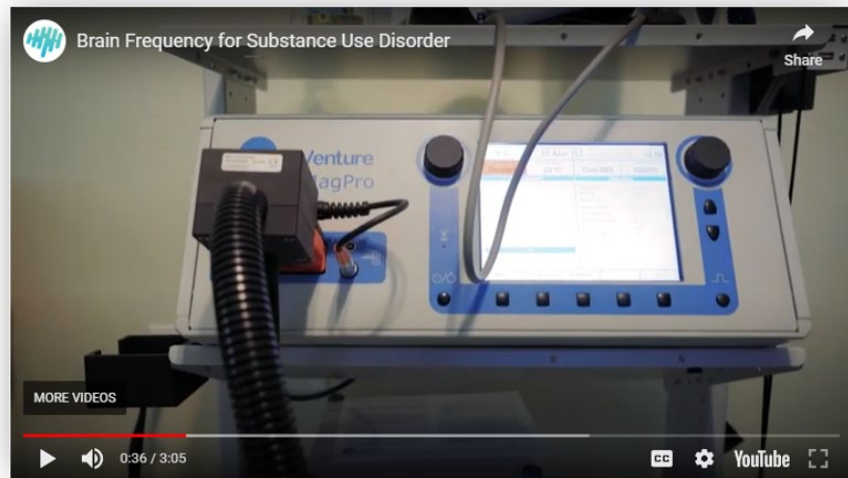
Power Supply

Mains voltage	230V~50/60 Hz according to IEC 60601-1
Maximum power consumption	2700 VA, operation from 100V~ or 120V~ through transformer

Ordering number
9016E0711

MagPro X100 Product Information Sheet, 03/23/2023.

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1 Infringing Activity

“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.



“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.

Cool-B65
📍 ⚙️

A butterfly-shaped coil, with active cooling, for focused stimulation, designed for protocols that require a very high number of stimuli. Optimized for high repetition rates and long pulse trains. Cooled by an external Cooler Unit. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016ED491	Butterfly	Active cooling	No

Outer dimensions 172 x 92 mm / 6.8 x 3.6 in.

Penetration depth (70 V/m) 31.5 mm / 1.24 in.

Magnetic field Peak at coil surface: 1.4 T
Gradient at 20 mm: 9 kT/s



Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1**Infringing Activity**

MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

Customer websites also describe adjusting a setting of a magnetic field. .

See screenshots, *supra*, from<https://brainfrequencydallas.com/welcome1>.<https://energy4lifecenters.com/brain-health/><https://thebiomedcenter.com/>

move an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field,

move a Q-factor of the intrinsic frequency toward a target Q-factor of the intrinsic frequency using the magnetic field,

move a coherence value of intrinsic frequencies among multiple sites in a brain of the subject

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field;

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>




Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1

within a specified EEG band toward a target coherence value using the magnetic field wherein if the coherence value is higher than the target coherence value, applying at least two asynchronous magnetic fields close to the head of the subject, and wherein if the coherence value is lower than the target coherence value, applying at least one synchronized magnetic field close to the head of the subject; and

move an EEG phase between two sites in the brain of a subject of a specified EEG frequency toward a target EEG phase of the specified EEG frequency using the magnetic field wherein the magnetic field comprises one or more magnetic field generators that are of the same frequency and are in-phase with each other, of the same frequency and out of phase with each other, or a combination thereof; and

Infringing Activity

FIRST	SECOND	THIRD
		
An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain .	Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various mental health disorders for the provider to consider during treatment.	Using personalized protocols, Brain Frequency™ AI software provides clinicians with an "Approval Ready" treatment plan based on each patient's specific needs.
LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING	LEARN MORE ABOUT MENTAL HEALTH DISORDERS	LEARN MORE ABOUT OUR TREATMENT PROCESS

<https://brainfrequency.ai/why-are-we-different%3F-1>

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1**Infringing Activity**

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
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- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

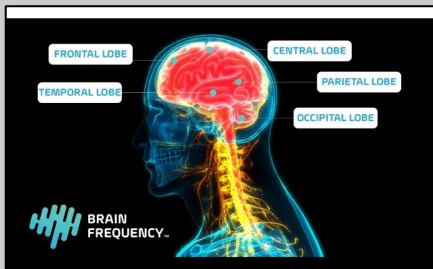
You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>



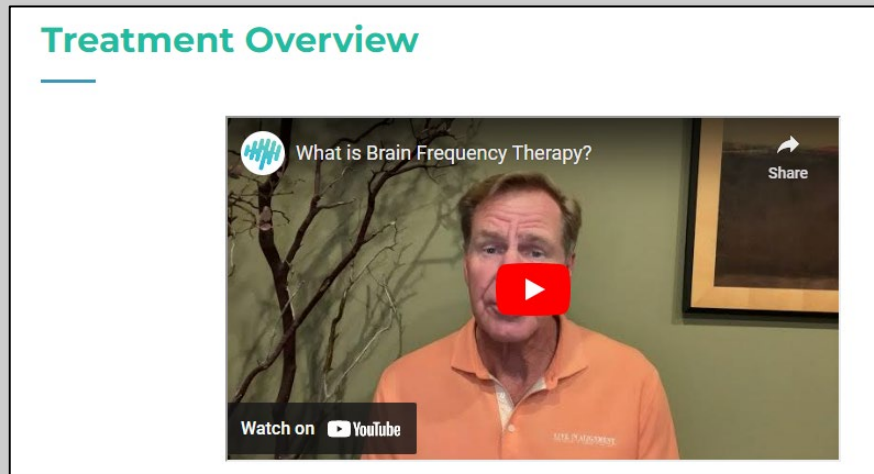
BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

[CONTACT US TODAY](#)

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

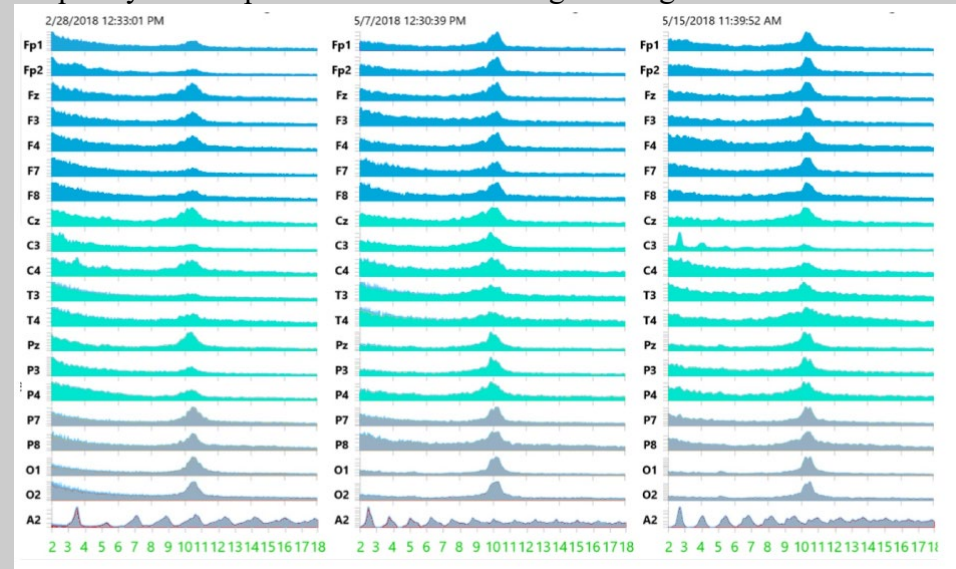
Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1**Infringing Activity**

“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



<https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1	Infringing Activity
	<p>In a podcast, Brain Frequency founder and member Shannon Malish further confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field.</p> <p><i>See, e.g.,</i> Gladden Longevity Podcast, Nov. 2022, “Is this how you fix your brain once and for all?” (in which Ms. Malish explains the development of and treatment of patients using Brain Frequency’s techniques) (available at https://gladdenlongevitypodcast.com/episodes, and https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fix-your-brain-once-and-for-all and https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34fadb30054a80)</p>
(b) applying said magnetic field close to the head of the subject.	<p>Information appearing on Brain Frequency’s website, on customer websites using the Brain Frequency technology, and on the TMS manufacturer website/product sheets confirm applying said magnetic field close to the head of the subject.</p>

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

<https://brainfrequency.ai/patient-faqs>

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequency.ai/patient-faqs>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1**Infringing Activity****How Can Brain Frequency™ Benefit My Practice?**

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability. Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

<https://brainfrequency.ai/affiliate-program>

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.


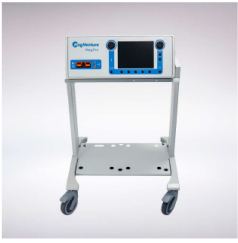
<https://brainfrequency.ai/provider-faqs-1>

What is Brain Frequency™?

<https://brainfrequency.ai/overview>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1**Infringing Activity**

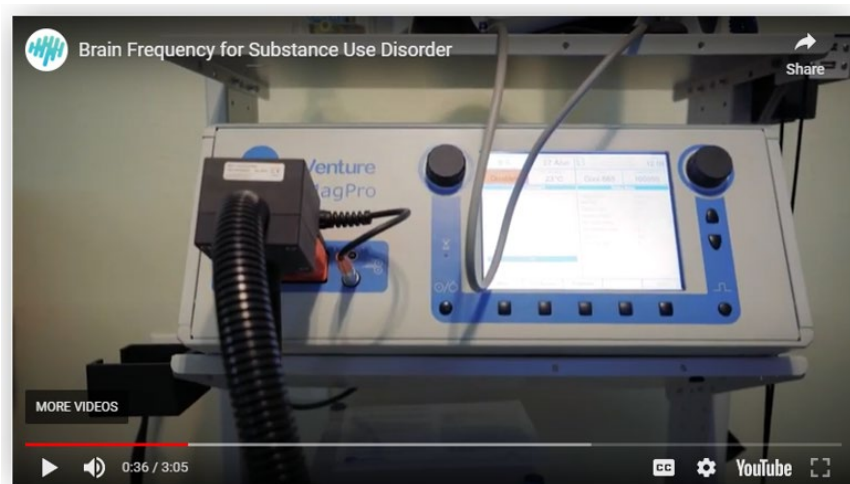
MAGPRO X100
Biphasic, Monophasic, Biphasic Burst (Theta Burst)

The MagPro X100 is a high performance magnetic stimulator designed primarily for research. It can provide both biphasic and monophasic pulse waveforms, electronically reverse current direction, complex pulse firing patterns, and high frequency stimulation up to 100 Hz. The device allows for storage of multiple stimulator setups, external control, and heat tolerance when performing intense, focused, and repeated protocols. Supports all clinical protocols, research, and diagnostic usage.

Contact
Website: www.magventure.com
Email: info@magventure.com

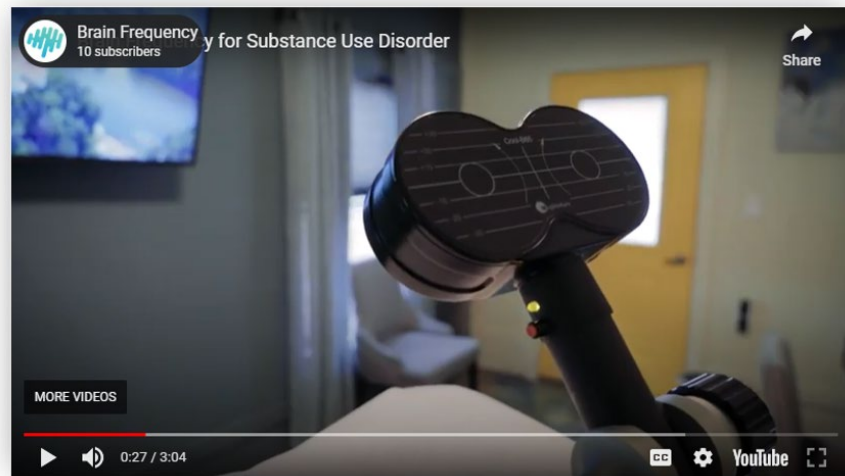
Max repetition rate	100 pps, 250 pps	Pulse mode	Standard
Waveform	Biphasic, Monophasic, Biphasic Burst (Theta Burst)	Current direction	Normal, Reverse
Rampup	Yes		
Intended use			
<p>Diagnostic Use: The MagPro X100 is intended as an electro-physiological aid to assess diagnosis and to monitor diseases of the central and peripheral nervous system, based on the use of Motor Evoked Potentials (MEP). Therapeutic Use: Treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from two prior antidepressant medications, at or above the minimal effective dose and duration in the current episode.</p>			
Mechanical Data			
HxWxD	210x530x400 mm/ 8.3x20.9x15.7 in		
	MagOption: 130 x 530 x 400mm/5.1x20.8x15.7		
Weight	Stimulator: 38 kg /84 lbs MagOption: 28kg/62lbs		
Environmental Data			
Operating temperature	10-30°C/50-86°F		
Storage temperature	5-50°C/41-122°F		
Operating humidity	30-60% RH		
Storage humidity	20-80% RH		
Power Supply			
Mains voltage	230V~50/60 Hz according to IEC 60601-1		
Maximum power consumption	2700 VA, operation from 100V~ or 120V~ through transformer		
Ordering number			
9016E0711			

MagPro X100 Product Information Sheet, 03/23/2023.



“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 1 Infringing Activity

“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.

Cool-B65

A butterfly-shaped coil, with active cooling, for focused stimulation, designed for protocols that require a very high number of stimuli. Optimized for high repetition rates and long pulse trains. Cooled by an external Cooler Unit. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016E0491	Butterfly	Active cooling	No

Outer dimensions: 172 x 92 mm / 6.8 x 3.6 in.
 Penetration depth (70 V/m): 31.5 mm / 1.24 in.
 Magnetic field: Peak at coil surface: 1.4 T
 Gradient at 20 mm: 9 kT/s

MagVenture, 2022 Product Catalog, p. 30.

Cool-B70

A butterfly-shaped coil, with active cooling, suitable for focused stimulations and demanding protocols that require a very high number of stimuli. The Cool-B70 coil has electrical and magnetic properties comparable with the MCF-B70. Designed with a slightly bent surface for best possible contact with the skull. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016E0521	Butterfly	Active cooling	No

Outer dimensions: 180 x 116 mm / 7.1 x 4.6 in.
 Penetration depth (70 V/m): 34.0 mm / 1.34 in.
 Magnetic field: Peak at coil surface: 1.4 T
 Gradient at 20 mm: 12 kT/s

MagVenture, 2022 Product Catalog, p. 33.

Exhibit 5 to Second Amended Complaint

<u>US 8,465,408 Claim 1</u>	<u>Infringing Activity</u>
	Customer websites also describe applying said magnetic field close to the head of the subject.. See screenshots, <i>supra</i> , from https://brainfrequencydallas.com/welcome1 . https://energy4lifecenters.com/brain-health/ https://thebiomedcenter.com/
<u>US 8,465,408 Claim 2</u>	<u>Infringing Activity</u>
A method of treating Parkinson's disease, treating coma, treating post traumatic stress disorder (PTSD), treating amblyopia, and/or enhancing cognitive performance in a subject, comprising	The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant makes, provides, sells, and induces the infringing use by customers of a method for treating PTSD in a subject according to claim 1.

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 2

Infringing Activity

BRAIN HEALTH & WELLNESS

MENTAL HEALTH DISORDERS

- Trauma & Stressor-Related
- Impulse Control & Conduct
- Schizophrenia & Psychotic
- Obsessive-Compulsive
- Substance & Addictive
- Neurodevelopmental
- Somatic Symptom
- Feeding & Eating
- Neurocognitive
- Dissociative
- Sleep-Wake
- Personality
- Depressive
- Anxiety
- Bipolar
- ADHD
- PTSD

<https://brainfrequency.ai/overview>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 2**Infringing Activity**

Patient: "Jason" Valid Psychometric Assessments Subjective			
Assessments	02/09/2022	02/22/2022	03/09/2022
Executive Functioning Scale	43	31	11
Anxiety	20	14	6
Depression	38	38	12
Brain Body Connection	29	15	8
Sleep	17	6	0
Post Trauma	58	22	6
Concussion Symptoms	65	47	33
Cravings	4	0	0
Obsessive Thoughts & Behaviors	37	23	11
<i>* Higher number represents more severe symptoms</i> <div> SEVERE MILD NORMAL </div>			

<https://brainfrequency.ai/overview>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 2**Infringing Activity****Brain Frequency™: A Ground-Breaking Therapeutic Approach to Your Brain's Possible Best**

Brain Frequency™ identifies the optimal operating frequency unique to your brain, and identifies those areas functioning below optimal frequency. Using this brain mapping information, the Brain Frequency™ software predicts mental health, neurological, and cognitive disorders, and will immediately recommend a treatment protocol.

HOW IT WORKS

STEP 1

**Brain Mapped**

Your brain is mapped with an EEG, then your brain waves are analyzed to produce a personalized brain map identifying current and optimal frequencies in 19 areas of your brain.

STEP 2

**Predictive Diagnostics**

Based on your brain map and self-reporting, Brain Frequency™ AI identifies the possible mental health, neurological, and/or cognitive diagnoses and opportunities to create your personalized brain frequency protocols.

STEP 3

**Personalized Plan**

Your brain map and treatment plan will be presented to you. The treatment course and the number will depend on what your brain needs. Your progress will be mapped with additional EEG(s).

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequencydallas.com/welcome1>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 2**Infringing Activity**

https://thebiomedcenter.com/about/#loc_slide1

moving at least one of: an intrinsic frequency of a brain of the subject within a specified EEG band toward a pre-selected intrinsic frequency within the same specified EEG band and a Q-factor of the intrinsic frequency toward a target Q-factor of the intrinsic frequency, by applying a magnetic field close

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms moving an intrinsic frequency within a specified EEG band of the subject toward a target intrinsic frequency within the specified EEG band by applying a magnetic field close to a head of the subject.

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 2

Infringing Activity

to a head of the
subject,


BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>


FIRST



An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in **19 areas of the brain**.

LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING


SECOND



Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various **mental health disorders** for the provider to consider during treatment.

LEARN MORE ABOUT MENTAL HEALTH DISORDERS

THIRD



Using personalized protocols, Brain Frequency™ AI software provides clinicians with an **"Approval Ready"** treatment plan based on each patient's specific needs.

LEARN MORE ABOUT OUR TREATMENT PROCESS

<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 2**Infringing Activity**

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
- **Treatment #1:** Details on the treatment process, Q&A; about 45 min.
- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

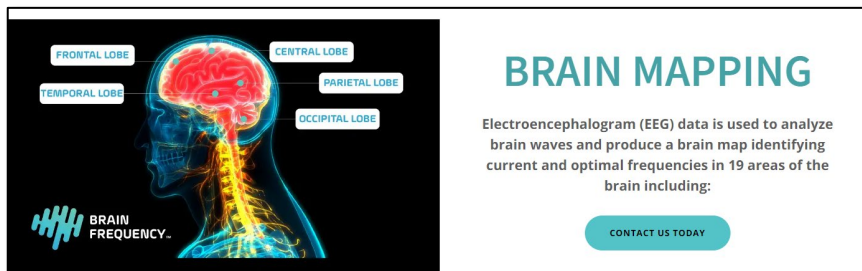
Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 2**Infringing Activity**

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>

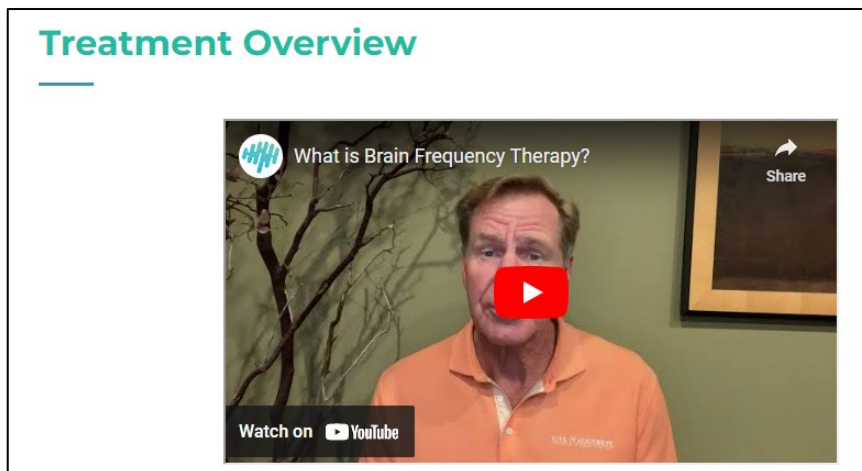


BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:


[CONTACT US TODAY](#)

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>



Treatment Overview

What is Brain Frequency Therapy?

Watch on  YouTube

Share

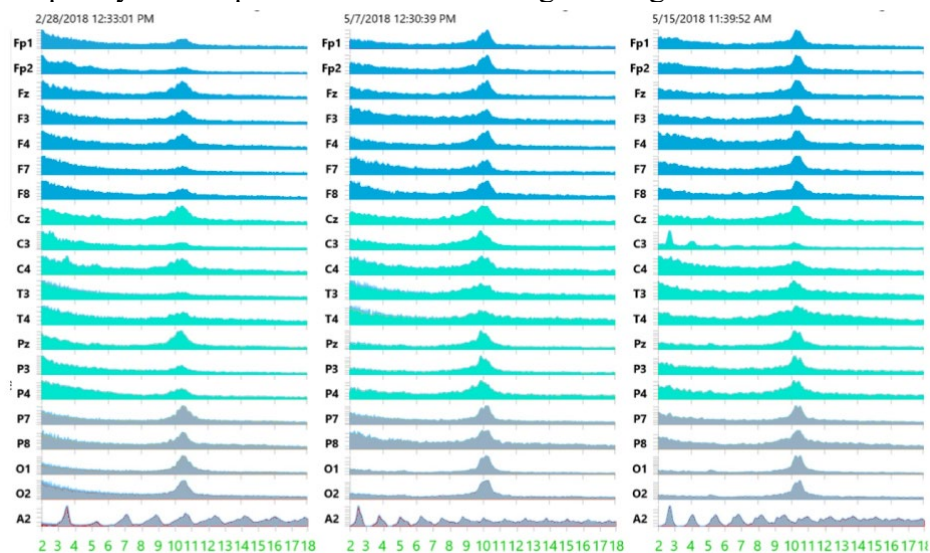
“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 2**Infringing Activity**

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



<https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd>

In a podcast, Brain Frequency founder and member Shannon Malish further confirms moving at least one of: an intrinsic frequency of a brain of the subject within a specified EEG band toward a pre-selected intrinsic frequency within the same specified EEG band and a Q-factor of the intrinsic frequency toward a target Q-factor of the intrinsic frequency, by applying a magnetic field close to a head of the subject.

See, e.g., Gladden Longevity Podcast, Nov. 2022, “Is this how you fix your brain once and for all?” (in which Ms. Malish explains the development of and treatment of patients using Brain Frequency’s techniques) (available at <https://gladdenlongevitypodcast.com/episodes>, and <https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fix-your-brain-once-and-for-all> and <https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34fad30054a80>)

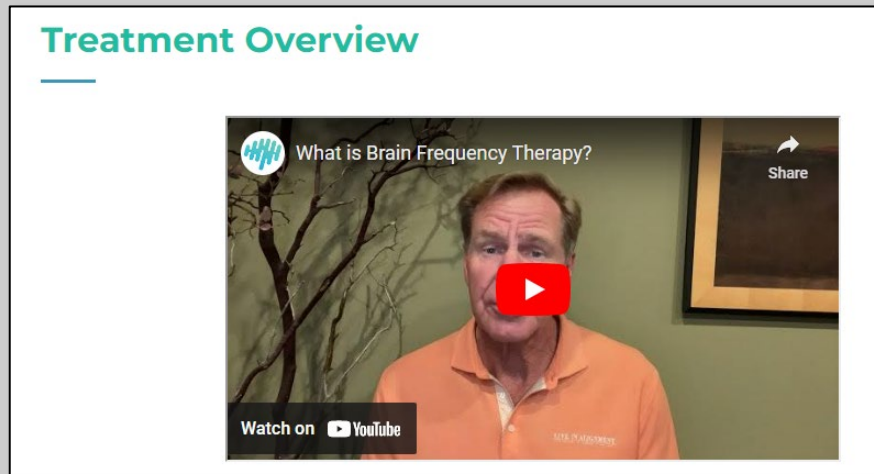
wherein the magnetic field comprises at least one of(a) a single target frequency within the specified EEG band; (b) a plurality of frequencies

Information appearing on Brain Frequency’s website confirms the magnetic field comprises at least one of(a) a single target frequency within the specified EEG band; (b) a plurality of frequencies within the specified EEG band; and (c) the intrinsic frequency of the brain of the subject within the specified EEG band.

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 2

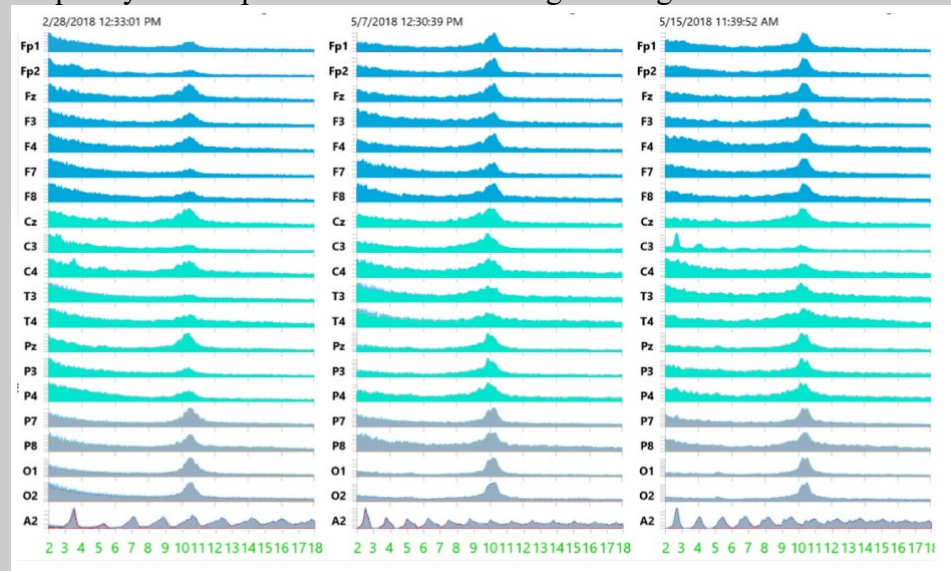
within the specified EEG band; and
(c) the intrinsic frequency of the brain of the subject within the specified EEG band.

Infringing Activity

“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



<https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 2**Infringing Activity**

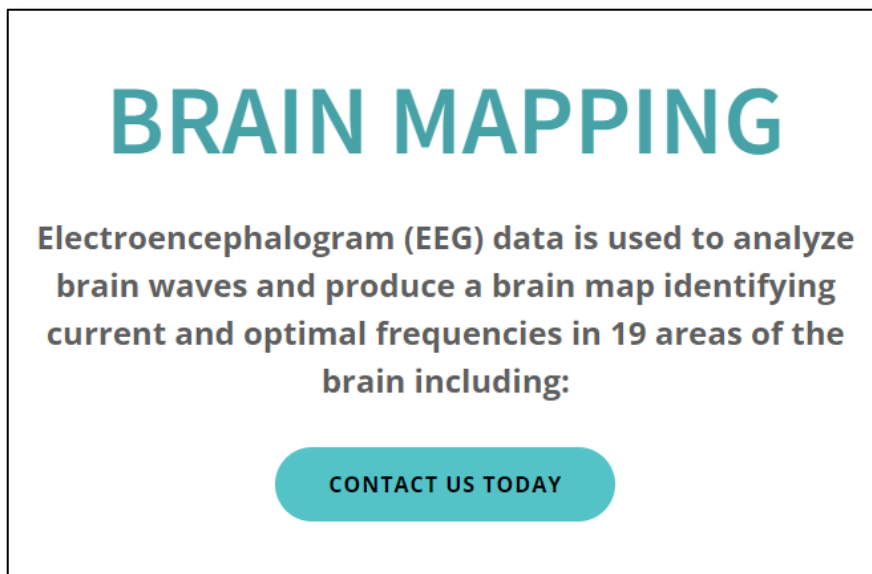
In a podcast, Brain Frequency founder and member Shannon Malish further confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field.

See, e.g., Gladden Longevity Podcast, Nov. 2022, “Is this how you fix your brain once and for all?” (in which Ms. Malish explains the development of and treatment of patients using Brain Frequency’s techniques) (available at <https://gladdenlongevitypodcast.com/episodes>, and <https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fix-your-brain-once-and-for-all> and <https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34fadb30054a80>)

US 8,465,408 Claim 3**Infringing Activity**

The method of claim 1 or 2, further comprising the step of measuring EEG data of the subject after the applying step.

Information appearing on Brain Frequency’s website confirms the step of measuring EEG data of the subject after the applying step.



BRAIN MAPPING




Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 3**Infringing Activity**

FIRST	SECOND	THIRD
		
An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain .	Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various mental health disorders for the provider to consider during treatment.	Using personalized protocols, Brain Frequency™ AI software provides clinicians with an "Approval Ready" treatment plan based on each patient's specific needs.
LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING	LEARN MORE ABOUT MENTAL HEALTH DISORDERS	LEARN MORE ABOUT OUR TREATMENT PROCESS

<https://brainfrequency.ai/why-are-we-different%3F-1>

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 3**Infringing Activity****What does the treatment process look like?**

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
- **Treatment #1:** Details on the treatment process, Q&A; about 45 min.
- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>

US 8,465,408 Claim 4**Infringing Activity**

The method of claim 1 or 2, further comprising the steps of: adjusting frequency of said magnetic field based on the EEG data of the subject; and repeating the applying step with an adjusted frequency.

Information appearing on Brain Frequency's website confirms adjusting frequency of said magnetic field based on the EEG data of the subject; and repeating the applying step with an adjusted frequency.

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 4**Infringing Activity**

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>

FIRST



An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in **19 areas of the brain**.

LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING

SECOND



Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various **mental health disorders** for the provider to consider during treatment.

LEARN MORE ABOUT MENTAL HEALTH DISORDERS

THIRD



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LEARN MORE ABOUT OUR TREATMENT PROCESS

<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 4**Infringing Activity**

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

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ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
- **Treatment #1:** Details on the treatment process, Q&A; about 45 min.
- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 4**Infringing Activity****How will I track my progress?**

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>

US 8,465,408 Claim 9**Infringing Activity**

The method of claim 1 or 2, wherein the step of applying the magnetic field is for about 5 minutes to about two hours.

Information appearing on Brain Frequency's website confirms applying the magnetic field is for about 5 minutes to about two hours.

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
- **Treatment #1:** Details on the treatment process, Q&A; about 45 min.
- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

US 8,465,408 Claim 10**Infringing Activity**

The method of claim 1 or 2, further comprising repeating the applying step after an interval about 6 hours to about 14 days.

Information appearing on Brain Frequency's website confirms repeating the applying step after an interval about 6 hours to about 14 days.

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 10**Infringing Activity****What does the treatment process look like?**

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
- **Treatment #1:** Details on the treatment process, Q&A; about 45 min.
- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

US 8,926,490, Claim 11**Infringing Activity**

The method of claim 1 or 2, further comprising: (a) locating a first electrode operable to detect electrical brain activity on the subject in at least one of an area of low electrical resistivity on the subject, and an area with substantially no electrical impulse interference on the subject; (b) locating a second electrode operable to detect a reference signal on the subject; and (c) determining the intrinsic frequency from the electrical brain activity detected by the first electrode and the reference

Information appearing on Brain Frequency's website confirms locating a first electrode operable to detect electrical brain activity on the subject in at least one of an area of low electrical resistivity on the subject, and an area with substantially no electrical impulse interference on the subject; (b) locating a second electrode operable to detect a reference signal on the subject; and (c) determining the intrinsic frequency from the electrical brain activity detected by the first electrode and the reference signal detected by the second electrode.

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 11 Infringing Activity

signal detected by the second electrode.

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>

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ALPHA (8 hz - 12 hz):

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<https://brainfrequency.ai/eeg-%26-assessments>

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 11 Infringing Activity

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

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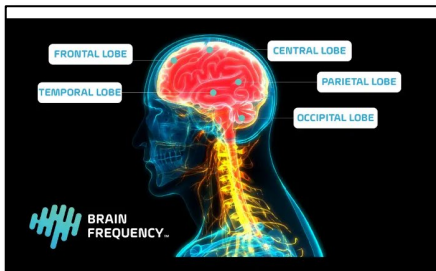
You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>



BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

[CONTACT US TODAY](#)

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12

12. A device for use in treating Parkinson's disease, treating coma, treating post traumatic stress disorder (PTSD), treating amblyopia, and/or enhancing cognitive performance in a subject, comprising:

Infringing Activity

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant makes, provides, sells, and induces the infringing use by customers of a device for use in treating PTSD in a subject according to claim 12.⁴

BRAIN HEALTH & WELLNESS

MENTAL HEALTH DISORDERS

- [Trauma & Stressor-Related](#)
- [Impulse Control & Conduct](#)
- [Schizophrenia & Psychotic](#)
- [Obsessive-Compulsive](#)
- [Substance & Addictive](#)
- [Neurodevelopmental](#)
- [Somatic Symptom](#)
- [Feeding & Eating](#)
- [Neurocognitive](#)
- [Dissociative](#)
- [Sleep-Wake](#)
- [Personality](#)
- [Depressive](#)
- [Anxiety](#)
- [Bipolar](#)
- [ADHD](#)
- [PTSD](#)

<https://brainfrequency.ai/overview>

⁴ The Brain Frequency website lists "locations" in four states: Gladden Longevity in Texas (<https://www.gladdenlongevity.com/> and <https://brainfrequencydallas.com/>), Live In Alignment in California (<https://www.liveinalignment.org/>), BioMed Scottsdale in Arizona (<https://thebiomedcenter.com/>), and Energy4Life Centers in Utah (<https://energy4lifecenters.com/>).

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12 Infringing Activity

Patient: "Jason" Valid Psychometric Assessments Subjective			
Assessments	02/09/2022	02/22/2022	03/09/2022
Executive Functioning Scale	43	31	11
Anxiety	20	14	6
Depression	38	38	12
Brain Body Connection	29	15	8
Sleep	17	6	0
Post Trauma	58	22	6
Concussion Symptoms	65	47	33
Cravings	4	0	0
Obsessive Thoughts & Behaviors	37	23	11
<i>* Higher number represents more severe symptoms</i> <div> SEVERE MILD NORMAL </div>			

<https://brainfrequency.ai/overview>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12 Infringing Activity**Brain Frequency™: A Ground-Breaking Therapeutic Approach to Your Brain's Possible Best**

Brain Frequency™ identifies the optimal operating frequency unique to your brain, and identifies those areas functioning below optimal frequency. Using this brain mapping information, the Brain Frequency™ software predicts mental health, neurological, and cognitive disorders, and will immediately recommend a treatment protocol.

HOW IT WORKS

STEP 1

**Brain Mapped**

Your brain is mapped with an EEG, then your brain waves are analyzed to produce a personalized brain map identifying current and optimal frequencies in 19 areas of your brain.

STEP 2

**Predictive Diagnostics**

Based on your brain map and self-reporting, Brain Frequency™ AI identifies the possible mental health, neurological, and/or cognitive diagnoses and opportunities to create your personalized brain frequency protocols.

STEP 3

**Personalized Plan**

Your brain map and treatment plan will be presented to you. The treatment course and the number will depend on what your brain needs. Your progress will be mapped with additional EEG(s).

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequencydallas.com/welcome1>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12 Infringing Activity

https://thebiomedcenter.com/about/#loc_slide1

a means for applying a magnetic field to a head of a subject; whereby the means for applying the magnetic field comprises: a first processor that controls the application of the magnetic field and wherein the first processor or a second processor moves at least one of:

Information appearing on Brain Frequency's website, customer websites, and the TMS manufacturer website/product sheets confirm a first processor that controls the application of the magnetic field.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

<https://brainfrequency.ai/patient-faqs>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12 Infringing Activity**Are there any risks?**

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequency.ai/patient-faqs>

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability. Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

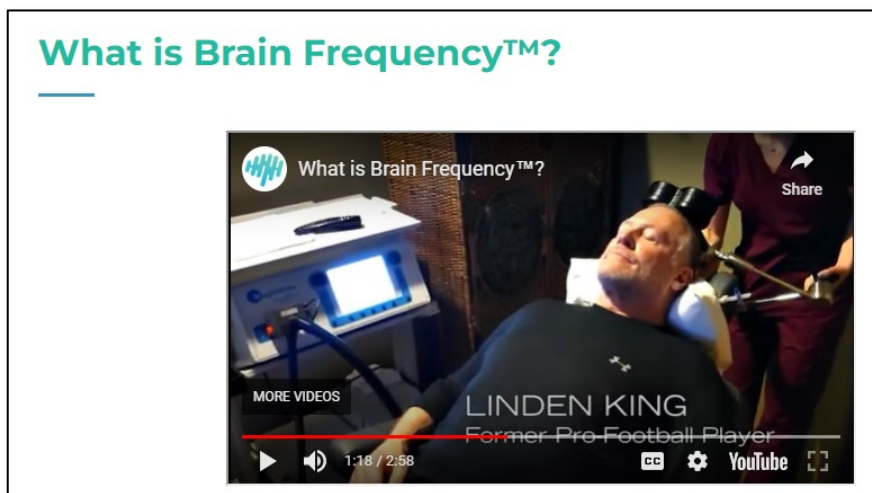
<https://brainfrequency.ai/affiliate-program>

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

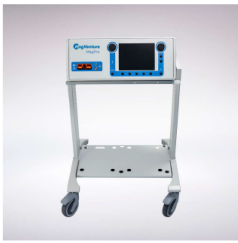
<https://brainfrequency.ai/provider-faqs-1>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12 Infringing Activity

<https://brainfrequency.ai/overview>

MagVenture
Research. Treatment. Results.



MAGPRO X100
Biphasic, Monophasic, Biphasic Burst (Theta Burst)

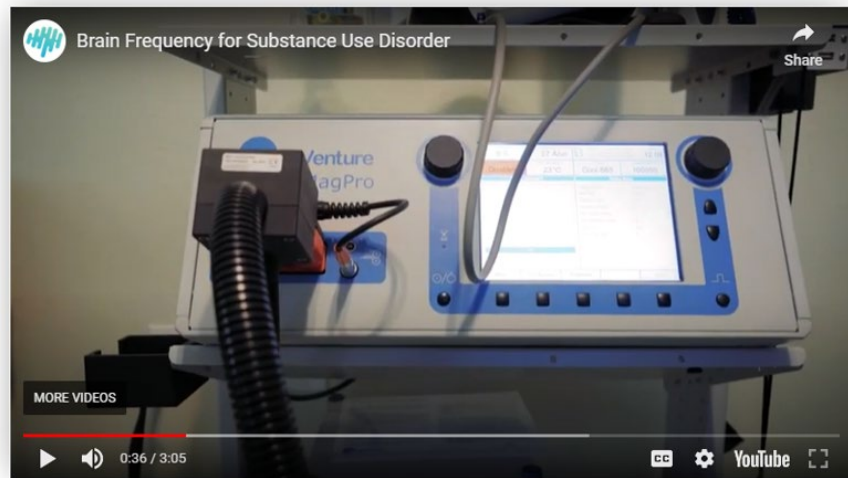
The MagPro X100 is a high performance magnetic stimulator designed primarily for research. It can provide both biphasic and monophasic pulse waveforms, electronically reverse current direction, complex pulse firing patterns, and high frequency stimulation up to 100 Hz. The device allows for storage of multiple stimulator setups, external control, and heat tolerance when performing intense, focused, and repeated protocols. Supports all clinical protocols, research, and diagnostic usage.

Contact
Website: www.magventure.com
Email: info@magventure.com

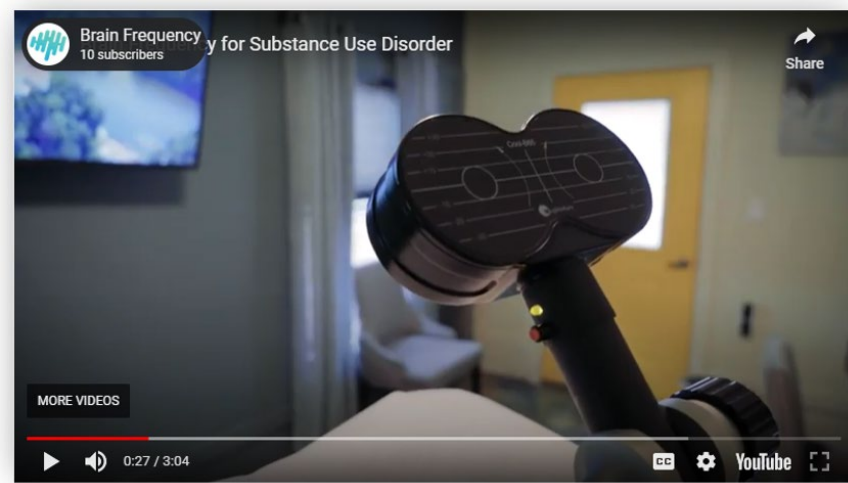
Max repetition rate	100 pps, 250 pps	Pulse mode	Standard
Waveform	Biphasic, Monophasic, Biphasic Burst (Theta Burst)	Current direction	Normal, Reverse
Ramp up	Yes		
Intended use			
<p>Diagnostic Use: The MagPro X100 is intended as an electro-physiological aid to assess diagnosis and to monitor diseases of the central and peripheral nervous system, based on the use of Motor Evoked Potentials (MEP). Therapeutic Use: Treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from two prior antidepressant medications, at or above the minimal effective dose and duration in the current episode.</p>			
Mechanical Data			
HxWxD	210x530x400 mm/ 8.3x20.9x15.7 in		
Weight	MagOption: 130 x 530 x 400mm/5.1x20.8x15.7 Stimulator: 38 kg /84 lbs MagOption: 28kg/62lbs		
Environmental Data			
Operating temperature	10-30°C/50-86°F		
Storage temperature	5-50°C/41-122°F		
Operating humidity	30-60% RH		
Storage humidity	20-80% RH		
Power Supply			
Mains voltage	230V~50/60 Hz according to IEC 60601-1		
Maximum power consumption	2700 VA, operation from 100V~ or 120V~ through transformer		
Ordering number			
9016E0711			

MagPro X100 Product Information Sheet, 03/23/2023.

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12 Infringing Activity

“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.



“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.

Cool-B65

A butterfly-shaped coil, with active cooling, for focused stimulation, designed for protocols that require a very high number of stimuli. Optimized for high repetition rates and long pulse trains. Cooled by an external Cooler Unit. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016ED491	Butterfly	Active cooling	No

Outer dimensions 172 x 92 mm / 6.8 x 3.6 in.

Penetration depth (70 V/m) 31.5 mm / 1.24 in.

Magnetic field Peak at coil surface: 1.4 T
Gradient at 20 mm: 9 kT/s

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12 Infringing Activity

MagVenture, 2022 Product Catalog, p. 30.



MagVenture, 2022 Product Catalog, p. 33.

Customer websites also describe application of frequencies (magnetic fields) to the head of a subject. See screenshots, *supra*, from <https://brainfrequencydallas.com/welcome1>, <https://energy4lifecenters.com/brain-health/>, <https://thebiomedcenter.com/>

Customer websites confirm the use of systems that include a processor configured to control the magnetic field (e.g., “brain mapping,” and “brain optimization”). See screenshots, *supra*, from <https://brainfrequencydallas.com/welcome1>, <https://energy4lifecenters.com/brain-health/>, <https://thebiomedcenter.com/>

wherein the first processor or a second processor moves at least one of:

(a) an intrinsic frequency of a brain of the subject in a specified EEG band to a target intrinsic frequency within the specified EEG band using the magnetic field;

Information appearing on Brain Frequency’s website confirms an intrinsic frequency of a brain of the subject in a specified EEG band to a target intrinsic frequency within the specified EEG band using the magnetic field.

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12**Infringing Activity**

(b) a Q-factor of an intrinsic frequency of the brain of the subject within a specified EEG band to a target Q-factor of the intrinsic frequency using the magnetic field;

(c) a coherence value of intrinsic frequencies among multiple sites in the brain of the subject within a specified EEG band using the magnetic field wherein if the coherence value is higher than a pre-selected coherence value, applying at least two asynchronous magnetic fields close to the head of the subject, and wherein if the coherence value is lower than the pre-selected coherence value, applying at least one synchronized magnetic field close to the head of the subject; and

(d) an EEG phase between two sites in the brain of the subject of a specified EEG frequency using the magnetic field wherein the magnetic field comprises a first magnetic field that is in-phase with a second magnetic field or a first magnetic field

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>

FIRST



An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain.

LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING

SECOND



Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various **mental health disorders** for the provider to consider during treatment.

LEARN MORE ABOUT MENTAL HEALTH DISORDERS

THIRD



Using personalized protocols, Brain Frequency™ AI software provides clinicians with an **"Approval Ready"** treatment plan based on each patient's specific needs.

LEARN MORE ABOUT OUR TREATMENT PROCESS

<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12

that is out of phase with a second magnetic field.

Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
- **Treatment #1:** Details on the treatment process, Q&A; about 45 min.
- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

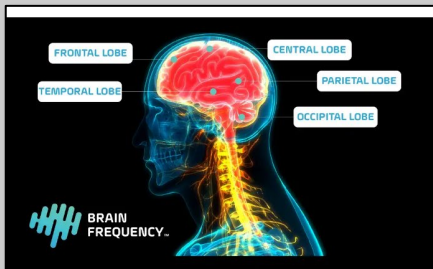
Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12 Infringing Activity

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>



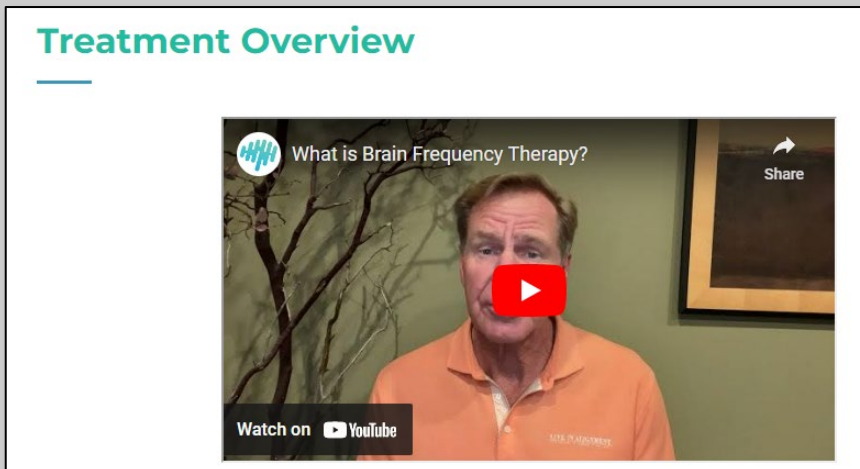
BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

[CONTACT US TODAY](#)

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

Treatment Overview



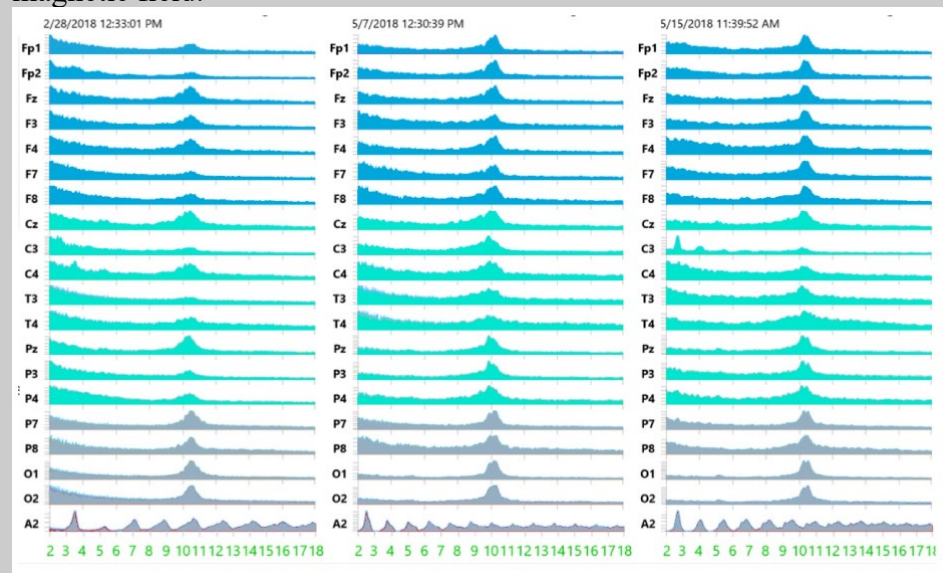
“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 12**Infringing Activity**

The Brain Frequency Center website confirms that the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.



<https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd>

In a podcast, Brain Frequency founder and member Shannon Malish further confirms that the magnetic field is configured to move the first intrinsic frequency in a pre-selected direction, up or down, within the specified EEG band using said magnetic field.

See, e.g., Gladden Longevity Podcast, Nov. 2022, “Is this how you fix your brain once and for all?” (in which Ms. Malish explains the development of and treatment of patients using Brain Frequency’s techniques) (available at <https://gladdenlongevitypodcast.com/episodes>, and <https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fix-your-brain-once-and-for-all> and <https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34fadb30054a80>)

US 8,465,408 Claim 20**Infringing Activity**

The device of claim 12, further comprising logic that calculates information from EEG

Information appearing on Brain Frequency’s website and on customer websites using the Brain Frequency technology confirms logic that calculates information from EEG data collected from the subject within a specified EEG band, wherein said information comprises at least one of

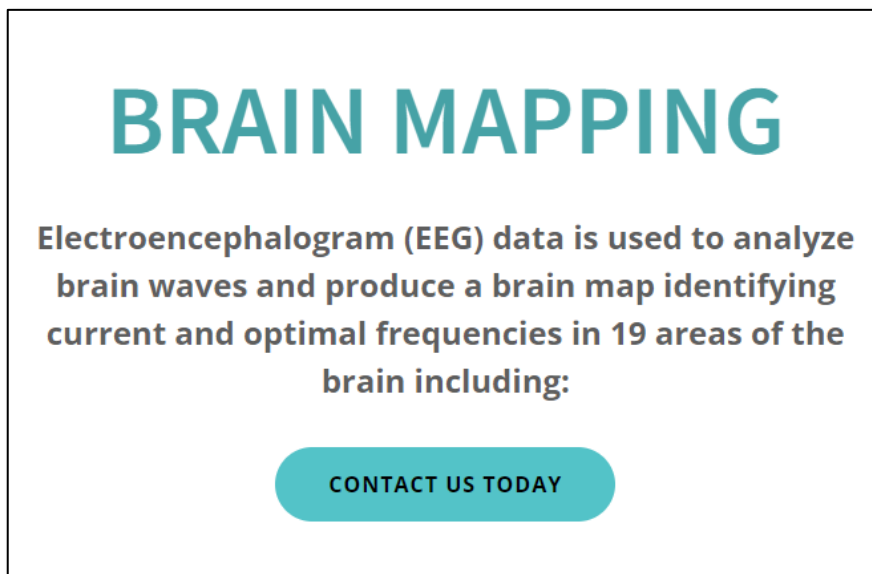
Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 20

data collected from the subject within a specified EEG band, wherein said information comprises at least one of items listed below: (a) the intrinsic frequency; (b) the Q-factor of the intrinsic frequency; (c) the coherence value of intrinsic frequencies; (d) the EEG phase; and (e) any combination thereof.

Infringing Activity

items listed below: (a) the intrinsic frequency; (b) the Q-factor of the intrinsic frequency; (c) the coherence value of intrinsic frequencies; (d) the EEG phase; and (e) any combination thereof.

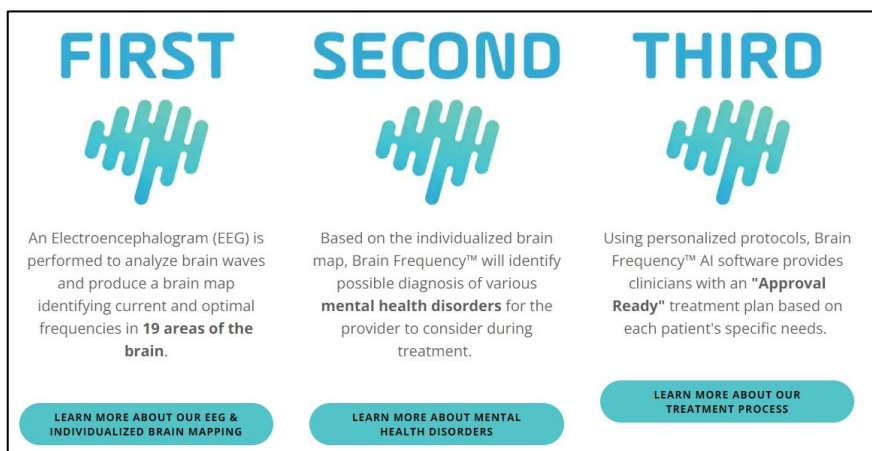





BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>



FIRST	SECOND	THIRD
		
An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain .	Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various mental health disorders for the provider to consider during treatment.	Using personalized protocols, Brain Frequency™ AI software provides clinicians with an "Approval Ready" treatment plan based on each patient's specific needs.
LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING	LEARN MORE ABOUT MENTAL HEALTH DISORDERS	LEARN MORE ABOUT OUR TREATMENT PROCESS

<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 20 Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

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<https://brainfrequency.ai/eeg-%26-assessments>

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- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

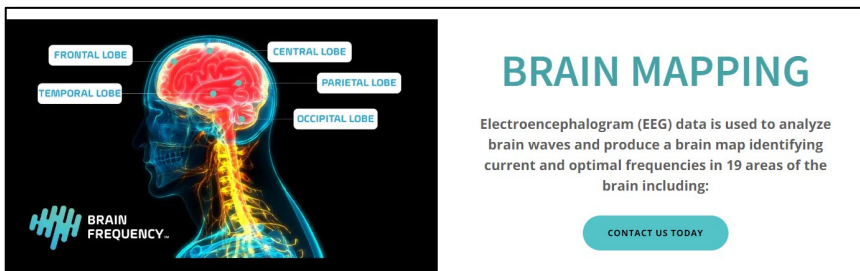
Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 20 Infringing Activity

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>

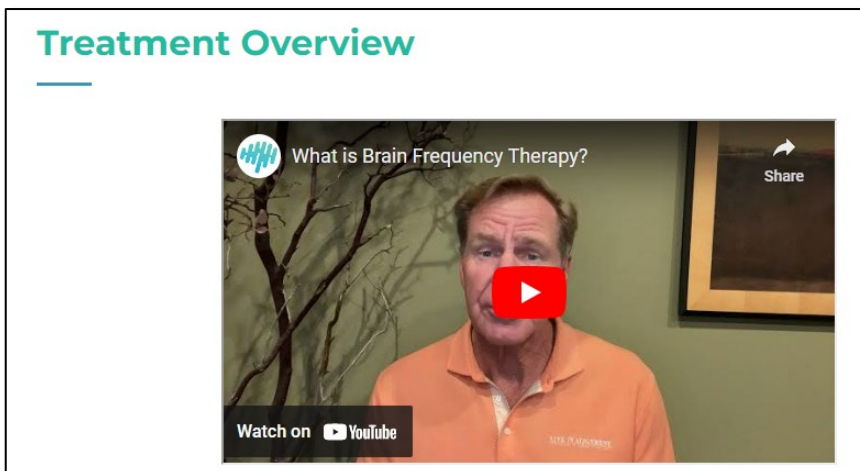


BRAIN MAPPING

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[CONTACT US TODAY](#)

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>



Treatment Overview

What is Brain Frequency Therapy?

Watch on  YouTube

Share

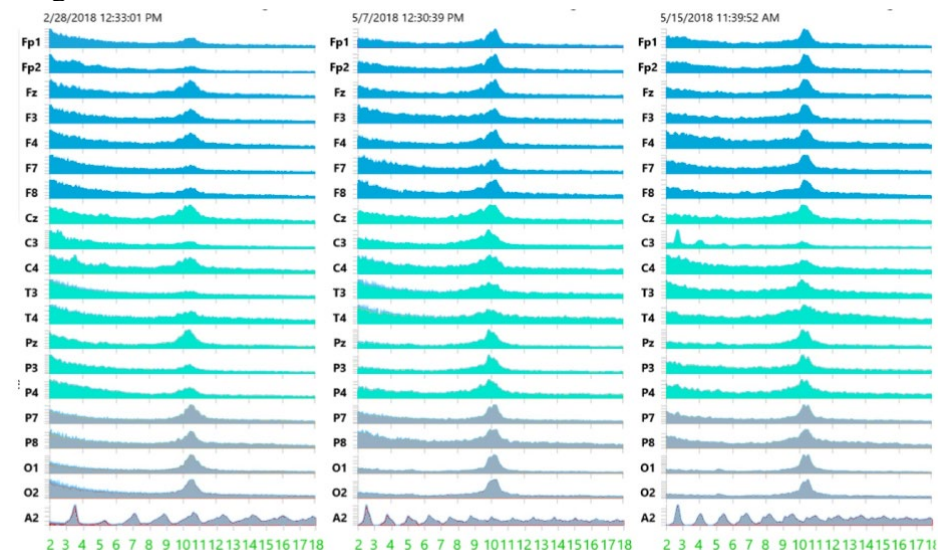
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“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 20**Infringing Activity**

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US 8,465,408 Claim 21**Infringing Activity**

The device of claim 12, further comprising: (a) a first electrode operable to detect

Information appearing on Brain Frequency’s website confirms a first electrode operable to detect electrical brain activity; and (b) a second electrode operable to detect a reference signal; wherein the first electrode is adapted to be located on the subject in at least one of: an area of low

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 21

electrical brain activity; and (b) a second electrode operable to detect a reference signal; wherein the first electrode is adapted to be located on the subject in at least one of: an area of low electrical resistivity on the subject, and an area with substantially no electrical impulse interference on the subject, and wherein the second electrode is adapted to be located on the subject.

Infringing Activity

electrical resistivity on the subject, and an area with substantially no electrical impulse interference on the subject, and wherein the second electrode is adapted to be located on the subject.

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>

WHAT ARE BRAIN WAVE FREQUENCIES?

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<https://brainfrequency.ai/eeg-%26-assessments>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 21 Infringing Activity

What does the treatment process look like?

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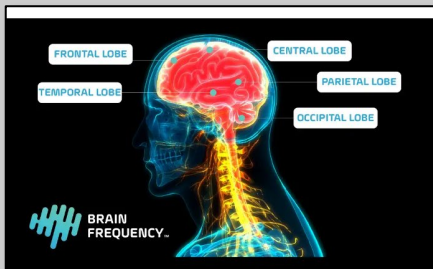
You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

How will I track my progress?

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<https://brainfrequency.ai/patient-faqs>



BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

[CONTACT US TODAY](#)

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

Exhibit 5 to Second Amended Complaint

US 8,870,737

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1**Infringing Activity****A method comprising:**

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant makes, provides, sells, and induces the infringing use by customers of a method according to claim 1.⁵

How do I know if I can integrate Brain Frequency™ into my clinic? ^

Since Brain Frequency™ is able to treat a wide array of mental health, neurological disorders, and cognitive functioning, we've separated our abilities into two distinct practices. One is for mental health and medical practitioners to treat DSM-5 diagnosable issues like depression, bipolar disorder, concussions, and the like. The other is for functional medicine and wellness, used to treat things like general sleep issues, mental fog, trouble with short term memory, tinnitus, etc. You can see more about this distinction on the Affiliate Program page.

<https://brainfrequency.ai/provider-faqs-1>

⁵ The Brain Frequency website lists "locations" in four states: Gladden Longevity in Texas (<https://www.gladdenlongevity.com/> and <https://brainfrequencydallas.com/>), Live In Alignment in California (<https://www.liveinalignment.org/>), BioMed Scottsdale in Arizona (<https://thebiomedcenter.com/>), and Energy4Life Centers in Utah (<https://energy4lifecenters.com/>).

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1 Infringing Activity

Brain Frequency™: A Ground-Breaking Therapeutic Approach to Your Brain's Possible Best

Brain Frequency™ identifies the optimal operating frequency unique to your brain, and identifies those areas functioning below optimal frequency. Using this brain mapping information, the Brain Frequency™ software predicts mental health, neurological, and cognitive disorders, and will immediately recommend a treatment protocol.

HOW IT WORKS

STEP 1

Brain Mapped

Your brain is mapped with an EEG, then your brain waves are analyzed to produce a personalized brain map identifying current and optimal frequencies in 19 areas of your brain.

STEP 2

Predictive Diagnostics

Based on your brain map and self-reporting, Brain Frequency™ AI identifies the possible mental health, neurological, and/or cognitive diagnoses and opportunities to create your personalized brain frequency protocols.

STEP 3

Personalized Plan

Your brain map and treatment plan will be presented to you. The treatment course and the number will depend on what your brain needs. Your progress will be mapped with additional EEG(s).

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequencydallas.com/welcome1>

(a) adjusting output of a magnetic field;

Information appearing on Brain Frequency's website, on the TMS manufacturer website/product sheets, and on customer websites confirm adjusting output of a magnetic field.

Does this treatment hurt? ^

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

<https://brainfrequency.ai/patient-faqs>

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1 Infringing Activity**Are there any risks?**

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

<https://brainfrequency.ai/patient-faqs>

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability. Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

<https://brainfrequency.ai/affiliate-program>

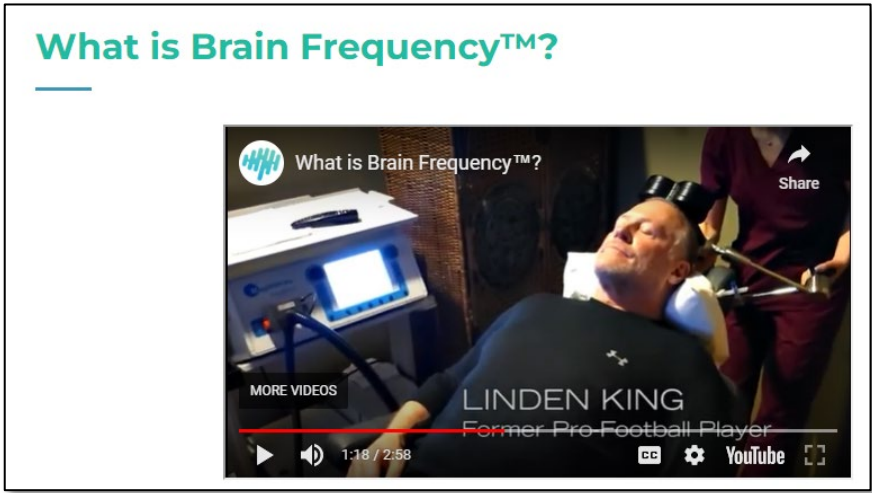
Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

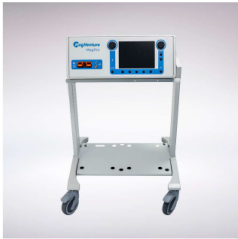
<https://brainfrequency.ai/provider-faqs-1>

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1 **Infringing Activity**



<https://brainfrequency.ai/overview>



MAGPRO X100
Biphasic, Monophasic, Biphasic Burst (Theta Burst)

The MagPro X100 is a high performance magnetic stimulator designed primarily for research. It can provide both biphasic and monophasic pulse waveforms, electronically reverse current direction, complex pulse firing patterns, and high frequency stimulation up to 100 Hz. The device allows for storage of multiple stimulator setups, external control, and heat tolerance when performing intense, focused, and repeated protocols. Supports all clinical protocols, research, and diagnostic usage.

Contact
Website: www.magventure.com
Email: info@magventure.com

Max repetition rate
100 pps, 250 pps

Waveform
Biphasic, Monophasic, Biphasic Burst (Theta Burst)

Ramp up
Yes

Intended use
Diagnostic Use: The MagPro X100 is intended as an electro-physiological aid to assess diagnosis and to monitor diseases of the central and peripheral nervous system, based on the use of Motor Evoked Potentials (MEP). **Therapeutic Use:** Treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from two prior antidepressant medications, at or above the minimal effective dose and duration in the current episode.

Mechanical Data
HxWxD
210x530x400 mm/ 8.3x20.9x15.7 in
MagOption:
130 x 530 x 400mm/5.1x20.8x15.7
Weight
Stimulator: 38 kg /84 lbs
MagOption: 28kg/62lbs

Environmental Data
Operating temperature
10-30°C/50-86°F
Storage temperature
5-50°C/41-122°F
Operating humidity
30-60% RH
Storage humidity
20-80% RH

Power Supply
Mains voltage
230V~50/60 Hz according to IEC 60601-1
Maximum power consumption
2700 VA, operation from 100V~ or 120V~ through transformer

Ordering number
9016E0711

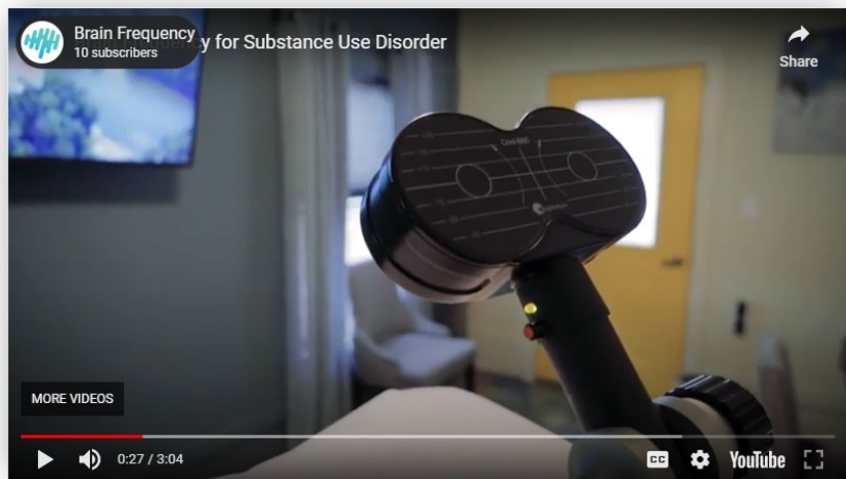
MagPro X100 Product Information Sheet, 03/23/2023.

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1 Infringing Activity



“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.



“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.

Cool-B65

A butterfly-shaped coil, with active cooling, for focused stimulation, designed for protocols that require a very high number of stimuli. Optimized for high repetition rates and long pulse trains. Cooled by an external Cooler Unit. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016ED491	Butterfly	Active cooling	No

Outer dimensions 172 x 92 mm / 6.8 x 3.6 in.

Penetration depth (70 V/m) 31.5 mm / 1.24 in.

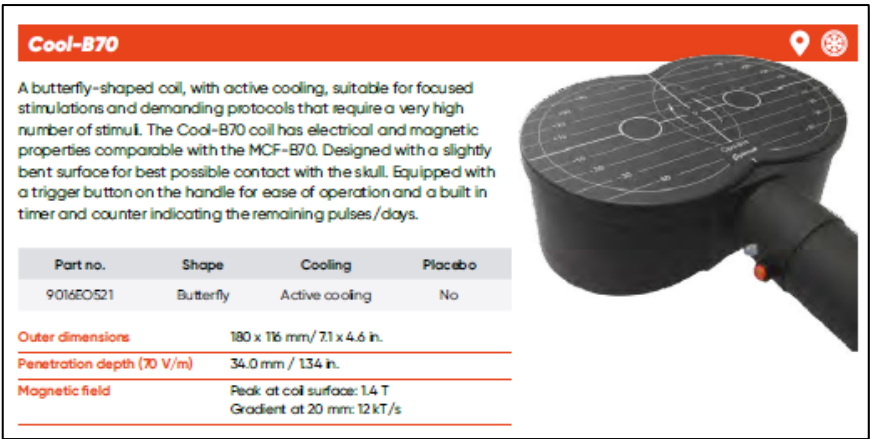
Magnetic field Peak at coil surface: 1.4 T
Gradient at 20 mm: 9 kT/s



Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1 Infringing Activity

MagVenture, 2022 Product Catalog, p. 30.

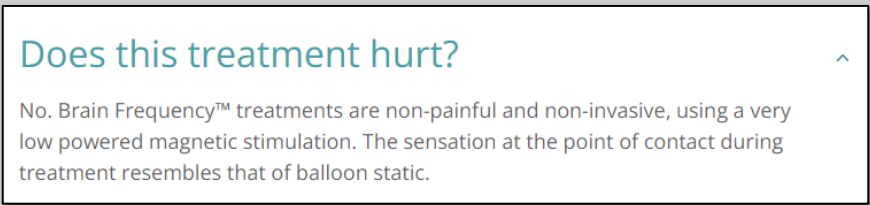


MagVenture, 2022 Product Catalog, p. 33.

Customer websites also describe adjusting output of a magnetic field. See screenshots, *supra*, from <https://brainfrequencydallas.com/welcome1>, <https://energy4lifecenters.com/brain-health/>, <https://thebiomedcenter.com/>

(b) applying said magnetic field close to a head of a subject; and

Information appearing on Brain Frequency’s website, on the TMS manufacturer website/product sheets, and on customer websites confirm applying said magnetic field close to a head of a subject.



<https://brainfrequency.ai/patient-faqs>

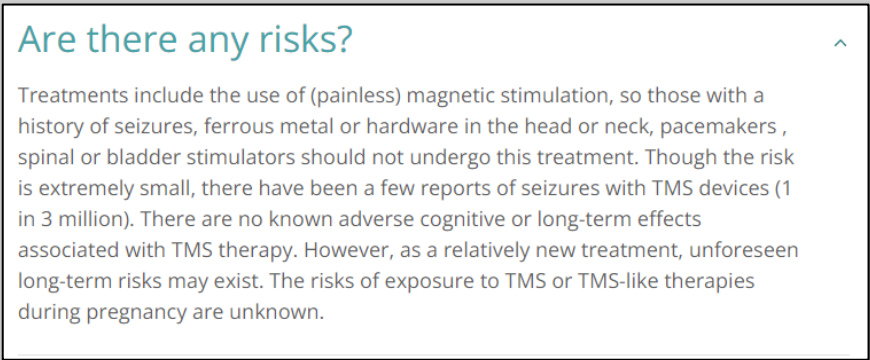


Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1**Infringing Activity**

<https://brainfrequency.ai/patient-faqs>

How Can Brain Frequency™ Benefit My Practice?

Brain Frequency™ is an AI software system developed to assist medical practitioners in the diagnosis and treatment of diverse trauma related conditions and mental health disorders. This evolutionary system integrates with, and improves upon, established medical and functional medicine practices, with direct implementation and adaptability. Connecting the communities of science, psychiatry, and health services, Brain Frequency™ uses a concentrated and individualized approach to standard TMS treatment protocols. Brain Frequency™ AI software's predictive diagnostic technology formulates a specific brain map identifying possible diagnoses and creates a recommended treatment plan from those conclusions.

<https://brainfrequency.ai/affiliate-program>

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

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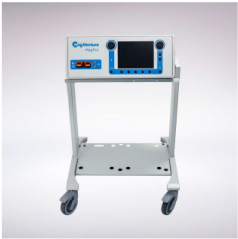
What is Brain Frequency™?



<https://brainfrequency.ai/overview>

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1 **Infringing Activity**



MAGPRO X100
Biphasic, Monophasic, Biphasic Burst (Theta Burst)

The MagPro X100 is a high performance magnetic stimulator designed primarily for research. It can provide both biphasic and monophasic pulse waveforms, electronically reverse current direction, complex pulse firing patterns, and high frequency stimulation up to 100 Hz. The device allows for storage of multiple stimulator setups, external control, and heat tolerance when performing intense, focused, and repeated protocols. Supports all clinical protocols, research, and diagnostic usage.

Contact
Website: www.magventure.com
Email: info@magventure.com

Max repetition rate
100 pps, 250 pps

Waveform
Biphasic, Monophasic, Biphasic Burst (Theta Burst)

Rampup
Yes

Intended use
Diagnostic Use: The MagPro X100 is intended as an electro-physiological aid to assess diagnosis and to monitor diseases of the central and peripheral nervous system, based on the use of Motor Evoked Potentials (MEP). **Therapeutic Use:** Treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from two prior antidepressant medications, at or above the minimal effective dose and duration in the current episode.

Mechanical Data

HxWxD	210x530x400 mm/ 8.3x20.9x15.7 in
Weight	MagOption: 130 x 530 x 400mm/5.1x20.8x15.7 Stimulator: 38 kg /84 lbs MagOption: 28kg/62lbs

Environmental Data

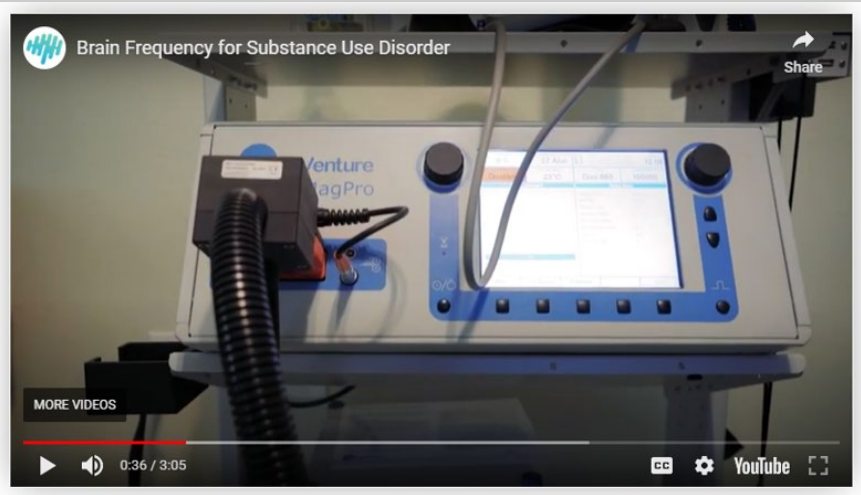
Operating temperature	10-30°C/50-86°F
Storage temperature	5-50°C/41-122°F
Operating humidity	30-60% RH
Storage humidity	20-80% RH

Power Supply

Mains voltage	230V~50/60 Hz according to IEC 60601-1
Maximum power consumption	2700 VA, operation from 100V~ or 120V~ through transformer

Ordering number
9016E0711

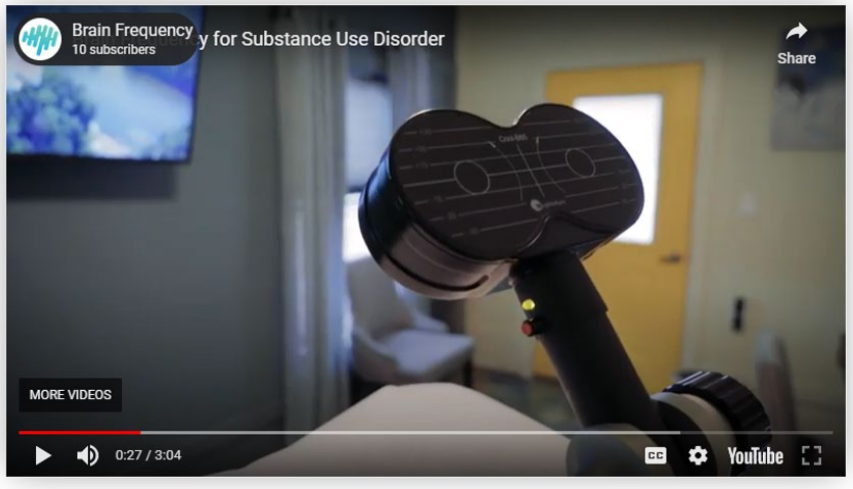
MagPro X100 Product Information Sheet, 03/23/2023.



“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1 **Infringing Activity**



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Cool-B65

A butterfly-shaped coil, with active cooling, for focused stimulation, designed for protocols that require a very high number of stimuli. Optimized for high repetition rates and long pulse trains. Cooled by an external Cooler Unit. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016E0491	Butterfly	Active cooling	No

Outer dimensions	172 x 92 mm / 6.8 x 3.6 in.
Penetration depth (70 V/m)	315 mm / 12.4 in.
Magnetic field	Peak at coil surface: 1.4 T Gradient at 20 mm: 9 kT/s

MagVenture, 2022 Product Catalog, p. 30.

Cool-B70

A butterfly-shaped coil, with active cooling, suitable for focused stimulations and demanding protocols that require a very high number of stimuli. The Cool-B70 coil has electrical and magnetic properties comparable with the MCF-B70. Designed with a slightly bent surface for best possible contact with the skull. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016E0521	Butterfly	Active cooling	No

Outer dimensions	180 x 116 mm/ 7.1 x 4.6 in.
Penetration depth (70 V/m)	34.0 mm / 1.34 in.
Magnetic field	Peak at coil surface: 1.4 T Gradient at 20 mm: 12 kT/s

MagVenture, 2022 Product Catalog, p. 33.

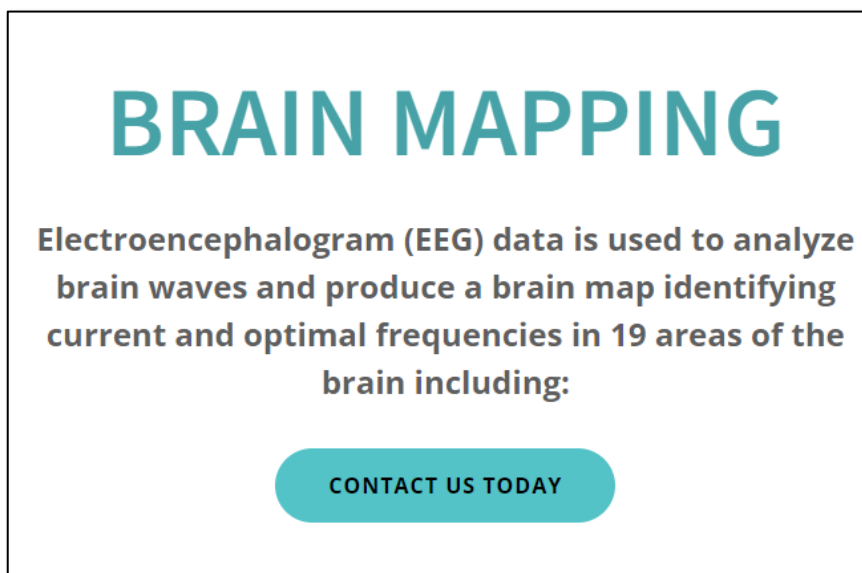
Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1**Infringing Activity**

Customer websites also describe applying said magnetic field close to a head of a subject. See screenshots, *supra*, from <https://brainfrequencydallas.com/welcome1>, <https://energy4lifecenters.com/brain-health/>, <https://thebiomedcenter.com/>

(c) moving, using the magnetic field, at least one of an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band and a Q-factor of an intrinsic frequency within a specified EEG band of the subject toward a pre-selected Q-factor,

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms moving, using the magnetic field, an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band;

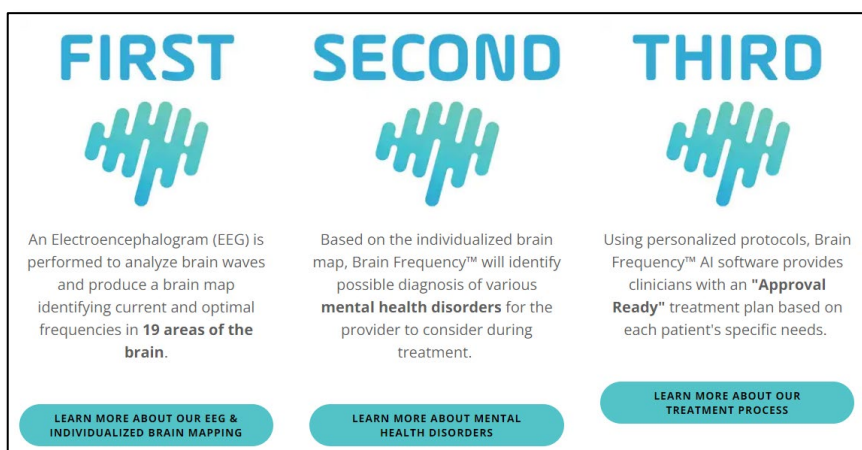





BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

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<https://brainfrequency.ai/why-are-we-different%3F-1>



FIRST	SECOND	THIRD
		
An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain .	Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various mental health disorders for the provider to consider during treatment.	Using personalized protocols, Brain Frequency™ AI software provides clinicians with an "Approval Ready" treatment plan based on each patient's specific needs.
LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING	LEARN MORE ABOUT MENTAL HEALTH DISORDERS	LEARN MORE ABOUT OUR TREATMENT PROCESS

<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1 Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
- **Treatment #1:** Details on the treatment process, Q&A; about 45 min.
- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

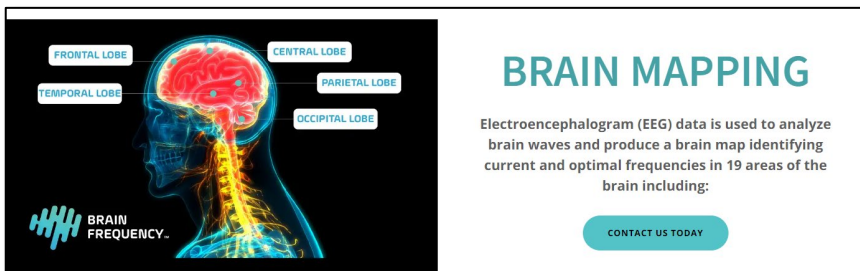
Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1 Infringing Activity

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>

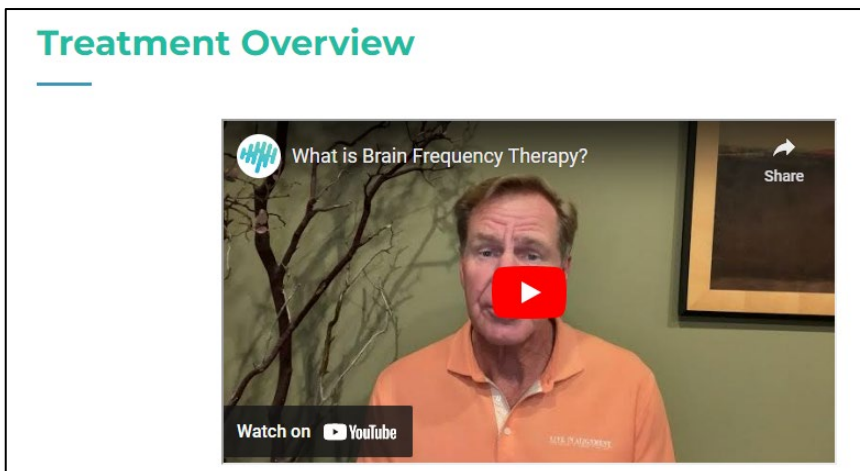


BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

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<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>



Treatment Overview

What is Brain Frequency Therapy?

Share

Watch on YouTube

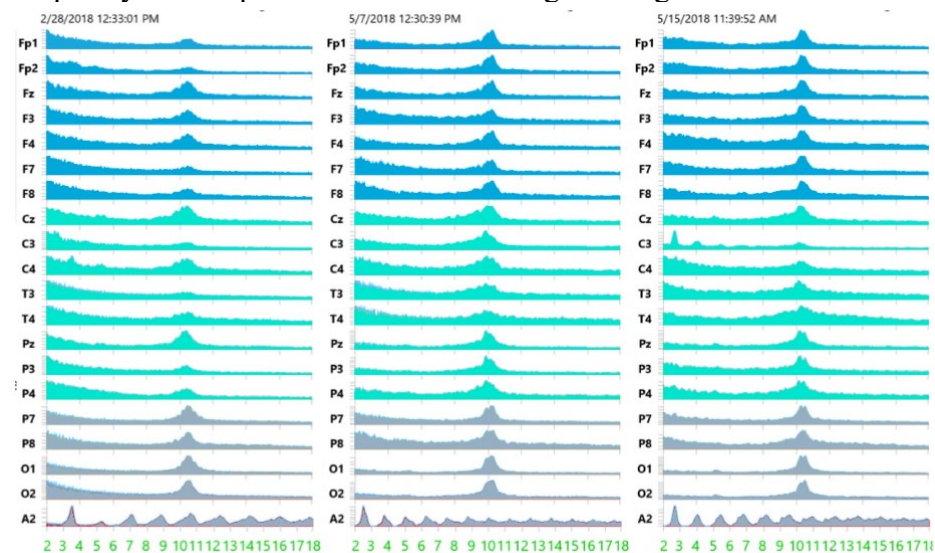
“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1**Infringing Activity**

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



<https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd>

In a podcast, Brain Frequency founder and member Shannon Malish further confirms moving, using the magnetic field, an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band.

See, e.g., Gladden Longevity Podcast, Nov. 2022, “Is this how you fix your brain once and for all?” (in which Ms. Malish explains the development of and treatment of patients using Brain Frequency’s techniques) (available at <https://gladdenlongevitypodcast.com/episodes>, and <https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fix-your-brain-once-and-for-all> and <https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34fad30054a80>)

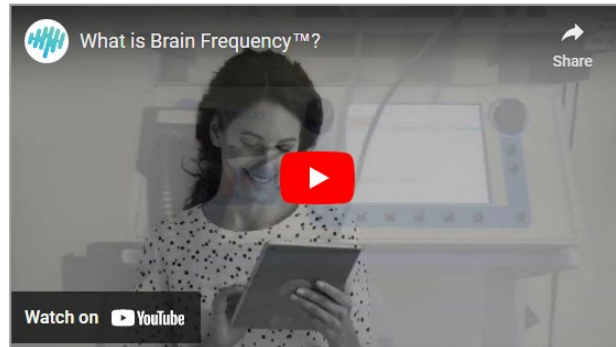
wherein the pre-selected intrinsic frequency is a frequency that increases blood flow in the cortex of the subject, and wherein the pre-selected Q-factor is a Q-factor

Information appearing on Brain Frequency’s website and on customer websites using the Brain Frequency technology confirms the pre-selected intrinsic frequency is a frequency that increases blood flow in the cortex of the subject, and wherein the pre-selected Q-factor is a Q-factor that increases blood flow in the cortex of the subject.

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1

that increases blood flow in the cortex of the subject.

Infringing Activity**What is Brain Frequency™?**

<https://brainfrequency.ai/overview>

Treatment Overview

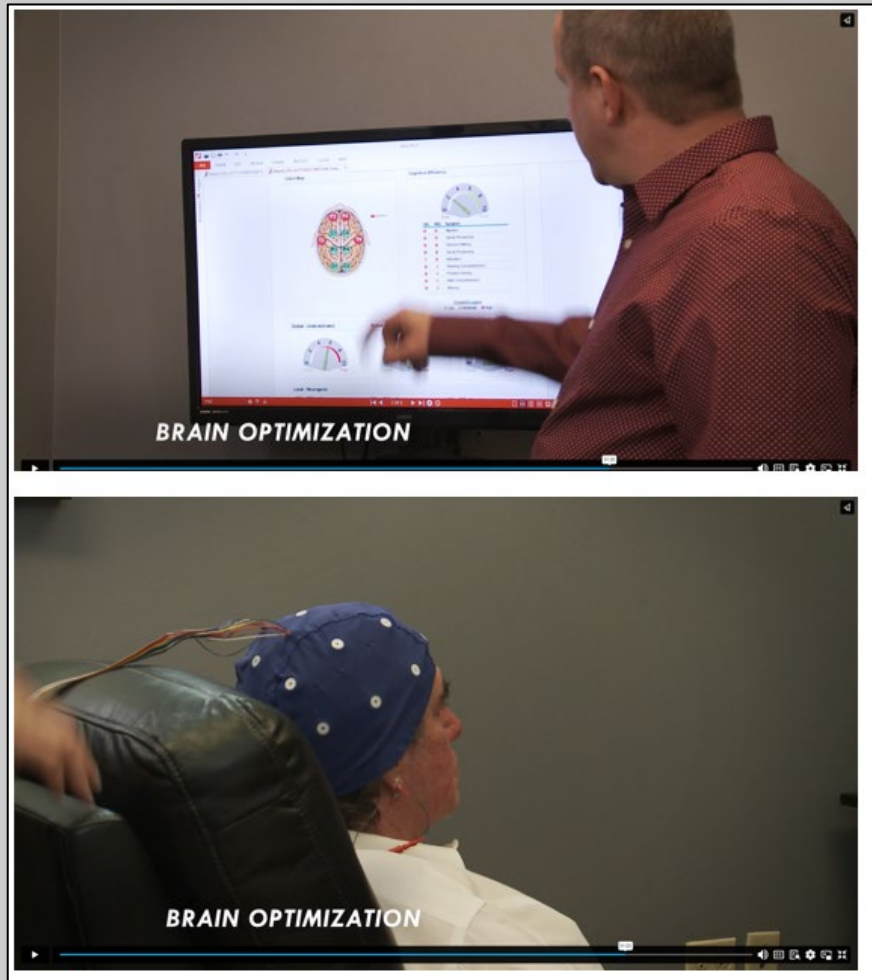
“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

Customer websites confirm the use of systems that include decreasing blood flow in a lower region of the brain of the subject (e.g., “computer generated therapeutic intervention,” brain mapping,” and “brain optimization”).

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 1 **Infringing Activity**



https://thebiomedcenter.com/about/#loc_slide1

See screenshots, *supra*, from
<https://brainfrequencydallas.com/welcome1>,
<https://energy4lifecenters.com/brain-health/>
<https://thebiomedcenter.com/>

US 8,870,737, Claim 2 **Infringing Activity**

A method comprising:

The preamble is not a limitation. To the extent that Defendant asserts that it is a limitation, the evidence appearing on Brain Frequency's website (brainfrequency.ai) and on customer websites regarding using the Brain Frequency technology confirms that Defendant makes,

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2 Infringing Activity

provides, sells, and induces the infringing use by customers of a method according to claim 1.⁶

How do I know if I can integrate Brain Frequency™ into my clinic?

Since Brain Frequency™ is able to treat a wide array of mental health, neurological disorders, and cognitive functioning, we've separated our abilities into two distinct practices. One is for mental health and medical practitioners to treat DSM-5 diagnosable issues like depression, bipolar disorder, concussions, and the like. The other is for functional medicine and wellness, used to treat things like general sleep issues, mental fog, trouble with short term memory, tinnitus, etc. You can see more about this distinction on the Affiliate Program page.

<https://brainfrequency.ai/provider-faqs-1>

Brain Frequency™: A Ground-Breaking Therapeutic Approach to Your Brain's Possible Best

Brain Frequency™ identifies the optimal operating frequency unique to your brain, and identifies those areas functioning below optimal frequency. Using this brain mapping information, the Brain Frequency™ software predicts mental health, neurological, and cognitive disorders, and will immediately recommend a treatment protocol.

HOW IT WORKS

STEP 1



Brain Mapped

Your brain is mapped with an EEG, then your brain waves are analyzed to produce a personalized brain map identifying current and optimal frequencies in 19 areas of your brain.

STEP 2



Predictive Diagnostics

Based on your brain map and self-reporting, Brain Frequency™ AI identifies the possible mental health, neurological, and/or cognitive diagnoses and opportunities to create your personalized brain frequency protocols.

STEP 3



Personalized Plan

Your brain map and treatment plan will be presented to you. The treatment course and the number will depend on what your brain needs. Your progress will be mapped with additional EEG(s).

Are there any risks?

Treatments include the use of (painless) magnetic stimulation, so those with a history of seizures, ferrous metal or hardware in the head or neck, pacemakers, spinal or bladder stimulators should not undergo this treatment. Though the risk is extremely small, there have been a few reports of seizures with TMS devices (1 in 3 million). There are no known adverse cognitive or long-term effects associated with TMS therapy. However, as a relatively new treatment, unforeseen long-term risks may exist. The risks of exposure to TMS or TMS-like therapies during pregnancy are unknown.

⁶ The Brain Frequency website lists “locations” in four states: Gladden Longevity in Texas (<https://www.gladdenlongevity.com/> and <https://brainfrequencydallas.com/>), Live In Alignment in California (<https://www.liveinalignment.org/>), BioMed Scottsdale in Arizona (<https://thebiomedcenter.com/>), and Energy4Life Centers in Utah (<https://energy4lifecenters.com/>).

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2**Infringing Activity**

<https://brainfrequencydallas.com/welcome1>

(a) adjusting output of a magnetic field;

Information appearing on Brain Frequency's website, on the TMS manufacturer website/product sheets, and on customer websites confirm adjusting output of a magnetic field.

Does this treatment hurt?

No. Brain Frequency™ treatments are non-painful and non-invasive, using a very low powered magnetic stimulation. The sensation at the point of contact during treatment resembles that of balloon static.

<https://brainfrequency.ai/patient-faqs>

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<https://brainfrequency.ai/affiliate-program>

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2 **Infringing Activity**

Is the equipment safe?

The TMS machine and the EEG cap are both FDA Approved. Clinical Trials began in Spring 2022.

<https://brainfrequency.ai/provider-faqs-1>

What is Brain Frequency™?



<https://brainfrequency.ai/overview>

MAGPRO X100
Biphasic, Monophasic, Biphasic Burst (Theta Burst)

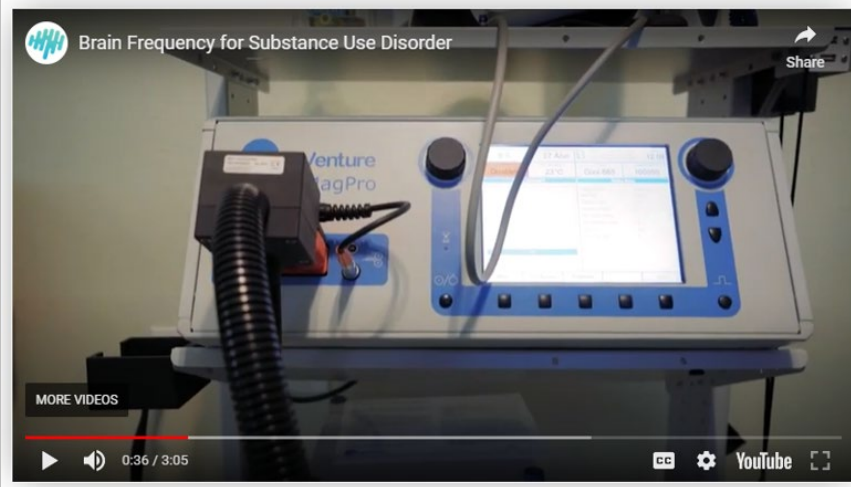
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Contact
Website: www.magventure.com
Email: info@magventure.com

Max repetition rate 100 pps, 250 pps	Pulse mode Standard
Waveform Biphasic, Monophasic, Biphasic Burst (Theta Burst)	Current direction Normal, Reverse
Ramp up Yes	
Intended use	
Diagnostic Use The MagPro X100 is intended as an electro-physiological aid to assess diagnosis and to monitor diseases of the central and peripheral nervous system, based on the use of Motor Evoked Potentials (MEP). Therapeutic Use Treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from two prior antidepressant medications, at or above the minimal effective dose and duration in the current episode	
Mechanical Data	
HxWxD	210x530x400 mm/ 8.3x20.9x15.7 in MagOption: 130 x 530 x 400mm/5.1x20.8x15.7
Weight	Stimulator: 39 kg/84 lbs MagOption: 28kg/62lbs
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Operating humidity	30-60% RH
Storage humidity	20-80% RH
Power Supply	
Mains voltage	230V~50/60 Hz according to IEC 60601-1
Maximum power consumption	2700 VA, operation from 100V~ or 120V~ through transformer
Ordering number	
9016E0711	

MagPro X100 Product Information Sheet, 03/23/2023.

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US 8,870,737, Claim 2 Infringing Activity

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Cool-B65
📍 ⚙️

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Part no.	Shape	Cooling	Placebo
9016ED491	Butterfly	Active cooling	No

Outer dimensions 172 x 92 mm / 6.8 x 3.6 in.

Penetration depth (70 V/m) 31.5 mm / 1.24 in.

Magnetic field Peak at coil surface: 1.4 T
Gradient at 20 mm: 9 kT/s



Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2 Infringing Activity

MagVenture, 2022 Product Catalog, p. 30.



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Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2 Infringing Activity<https://brainfrequency.ai/patient-faqs>**How Can Brain Frequency™ Benefit My Practice?**

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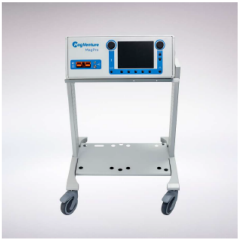
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Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2 Infringing Activity

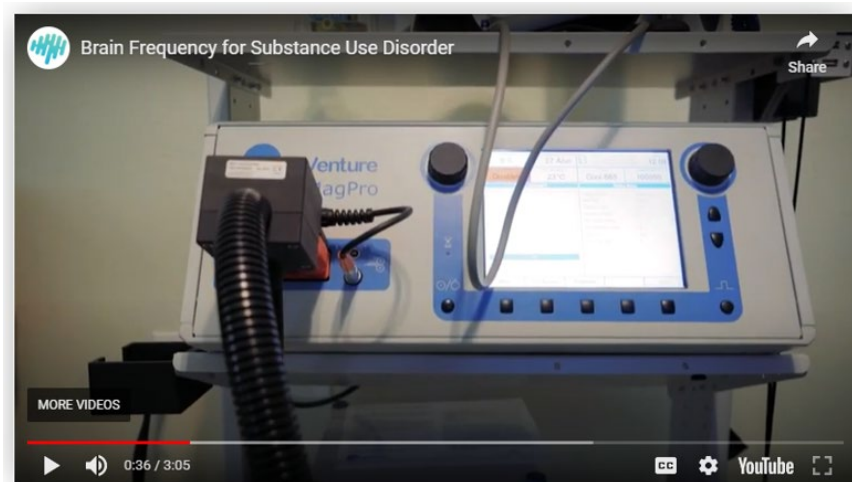
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Contact
Website: www.magventure.com
Email: info@magventure.com

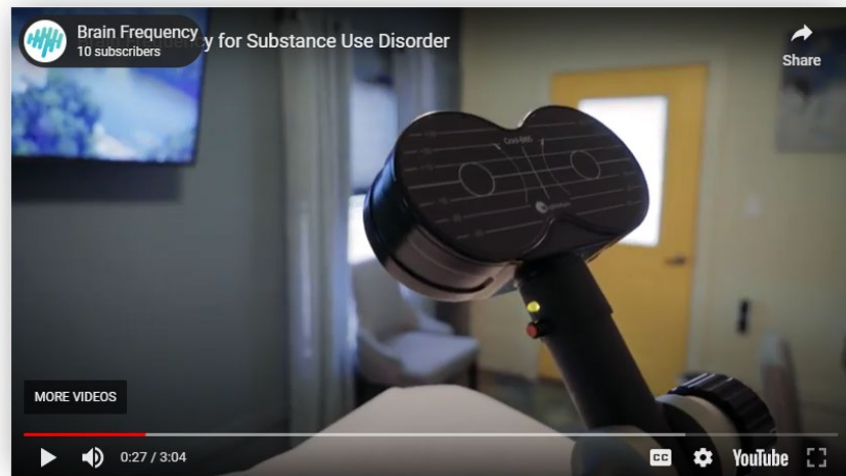
Max repetition rate	100 pps, 250 pps	Pulse mode	Standard
Waveform	Biphasic, Monophasic, Biphasic Burst (Theta Burst)	Current direction	Normal, Reverse
Rampup	Yes		
Intended use			
<p>Diagnostic Use: The MagPro X100 is intended as an electro-physiological aid to assess diagnosis and to monitor diseases of the central and peripheral nervous system, based on the use of Motor Evoked Potentials (MEP). Therapeutic Use: Treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from two prior antidepressant medications, at or above the minimal effective dose and duration in the current episode.</p>			
Mechanical Data			
HxWxD	210x530x400 mm/ 8.3x20.9x15.7 in		
	MagOption: 130 x 530 x 400mm/5.1x20.8x15.7		
Weight	Stimulator: 38 kg /84 lbs MagOption: 28kg/62lbs		
Environmental Data			
Operating temperature	10-30°C/50-86°F		
Storage temperature	5-50°C/41-122°F		
Operating humidity	30-60% RH		
Storage humidity	20-80% RH		
Power Supply			
Mains voltage	230V~50/60 Hz according to IEC 60601-1		
Maximum power consumption	2700 VA, operation from 100V~ or 120V~ through transformer		
Ordering number			
9016E0711			

MagPro X100 Product Information Sheet, 03/23/2023.



“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2 Infringing Activity

“Brain Frequency for Substance Use Disorder” video at Brain Frequency YouTube page: <https://www.youtube.com/watch?v=ZT4CgJxgb5c>.

Cool-B65

A butterfly-shaped coil, with active cooling, for focused stimulation, designed for protocols that require a very high number of stimuli. Optimized for high repetition rates and long pulse trains. Cooled by an external Cooler Unit. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016E0491	Butterfly	Active cooling	No

Outer dimensions: 172 x 92 mm / 6.8 x 3.6 in.
 Penetration depth (70 V/m): 315 mm / 12.4 in.
 Magnetic field: Peak at coil surface: 14 T
 Gradient at 20 mm: 9 kT/s

MagVenture, 2022 Product Catalog, p. 30.

Cool-B70

A butterfly-shaped coil, with active cooling, suitable for focused stimulations and demanding protocols that require a very high number of stimuli. The Cool-B70 coil has electrical and magnetic properties comparable with the MCF-B70. Designed with a slightly bent surface for best possible contact with the skull. Equipped with a trigger button on the handle for ease of operation and a built in timer and counter indicating the remaining pulses/days.

Part no.	Shape	Cooling	Placebo
9016E0521	Butterfly	Active cooling	No

Outer dimensions: 180 x 116 mm / 7.1 x 4.6 in.
 Penetration depth (70 V/m): 34.0 mm / 1.34 in.
 Magnetic field: Peak at coil surface: 14 T
 Gradient at 20 mm: 12 kT/s

MagVenture, 2022 Product Catalog, p. 33.

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2**Infringing Activity**

Customer websites also describe applying said magnetic field close to a head of a subject. See screenshots, *supra*, from <https://brainfrequencydallas.com/welcome1>, <https://energy4lifecenters.com/brain-health/>, <https://thebiomedcenter.com/>

(c) moving, using the magnetic field, an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band,

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms moving, using the magnetic field, an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band;

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>

FIRST



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LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING

SECOND



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LEARN MORE ABOUT MENTAL HEALTH DISORDERS

THIRD



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LEARN MORE ABOUT OUR TREATMENT PROCESS

<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2 Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

- **Intake Appointment:** Initial EEG, questionnaire, assessments, and review; about one hour.
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- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

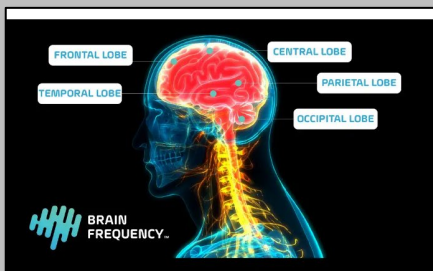
Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2 Infringing Activity

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>



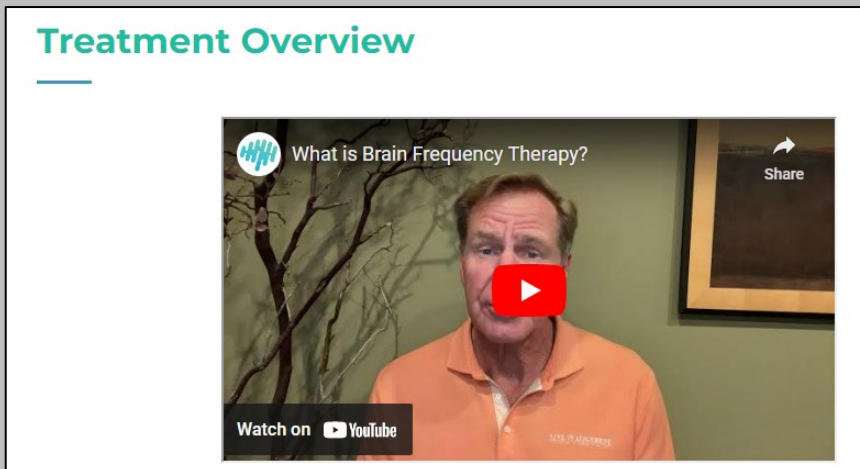
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[CONTACT US TODAY](#)

<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

Treatment Overview



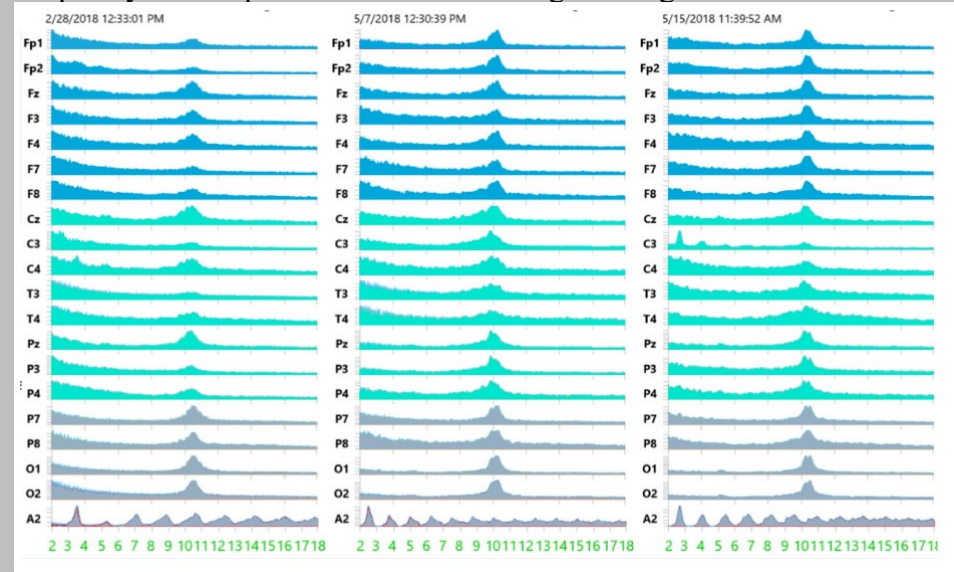
“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2**Infringing Activity**

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



<https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd>

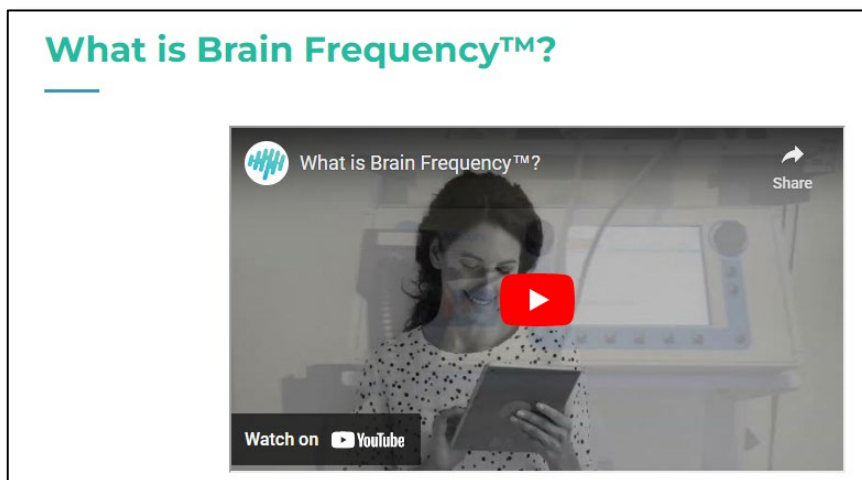
In a podcast, Brain Frequency founder and member Shannon Malish further confirms moving, using the magnetic field, an intrinsic frequency of a specified EEG band of the subject toward a pre-selected intrinsic frequency of the specified EEG band.

See, e.g., Gladden Longevity Podcast, Nov. 2022, “Is this how you fix your brain once and for all?” (in which Ms. Malish explains the development of and treatment of patients using Brain Frequency’s techniques) (available at <https://gladdenlongevitypodcast.com/episodes>, and <https://gladdenlongevitypodcast.com/episodes/f/is-this-how-you-fix-your-brain-once-and-for-all> and <https://open.spotify.com/episode/1tYFdD61I7dN4nvD7YrKKK?si=ef34fad30054a80>)

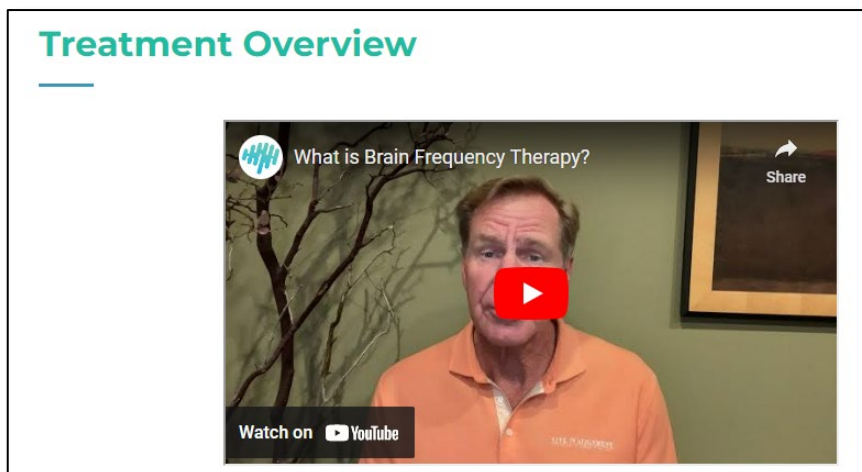
wherein the pre-selected intrinsic frequency is a frequency that decreases blood flow in a lower region of the brain of the subject.

Information appearing on Brain Frequency’s website and on customer websites using the Brain Frequency technology confirms the pre-selected intrinsic frequency is a frequency that decreases blood flow in a lower region of the brain of the subject.

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2 Infringing Activity

<https://brainfrequency.ai/overview>



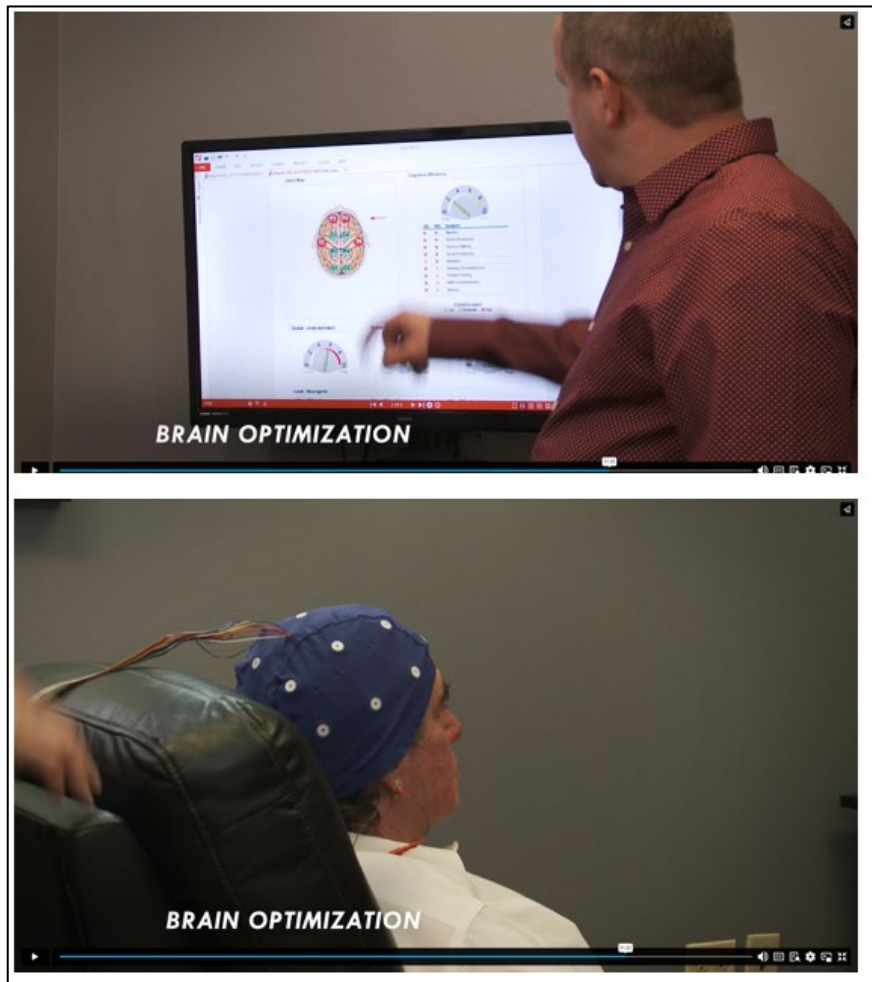
“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

Customer websites confirm the use of systems that include the pre-selected intrinsic frequency is a frequency that decreases blood flow in a lower region of the brain of the subject (e.g., “computer generated therapeutic intervention,” brain mapping,” and “brain optimization”).

Exhibit 5 to Second Amended Complaint

US 8,870,737, Claim 2 **Infringing Activity**



https://thebiomedcenter.com/about/#loc_slide1

See screenshots, *supra*, from
<https://brainfrequencydallas.com/welcome1>,
<https://energy4lifecenters.com/brain-health/>
<https://thebiomedcenter.com/>

US 8,870,737 Claim 3 **Infringing Activity**

The method of any of claims 1 and 2, further comprising taking EEG measurements of the subject before the adjusting step or after the applying step, or

Information appearing on Brain Frequency's website confirms taking EEG measurements of the subject before the adjusting step or after the applying step, or both before the adjusting step and after the applying step.

Exhibit 5 to Second Amended Complaint

US 8,870,737 Claim 3**Infringing Activity**

both before the
adjusting step and
after the applying step.

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>

FIRST



An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in **19 areas of the brain**.

LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING

SECOND



Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various **mental health disorders** for the provider to consider during treatment.

LEARN MORE ABOUT MENTAL HEALTH DISORDERS

THIRD



Using personalized protocols, Brain Frequency™ AI software provides clinicians with an **"Approval Ready"** treatment plan based on each patient's specific needs.

LEARN MORE ABOUT OUR TREATMENT PROCESS

<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 8,870,737 Claim 3**Infringing Activity**

WHAT ARE BRAIN WAVE FREQUENCIES?

BETA (12 hz - 27 hz):

- **Wide awake.** This is generally the mental state most people are in during the day and most of their waking lives. Usually, this state in itself is uneventful, but don't underestimate its importance. Many people lack sufficient beta activity, which can cause mental or emotional disorders such as depression, ADD, insomnia, and low SMR production (a sub-range of beta at 12-15hz) which may be related to insomnia. Stimulating beta activity can improve emotional stability, energy levels, attentiveness and concentration.

ALPHA (8 hz - 12 hz):

- **Awake but relaxed and not processing much information.** When you get up in the morning and just before sleep, you are naturally in this state. When you close your eyes your brain automatically starts producing more alpha waves. Many studies monitoring the EEG activity of experienced meditators have revealed strong increases in alpha activity. Alpha activity has also been connected to the ability to recall memories, lessened discomfort and pain, and reductions in stress and anxiety.

<https://brainfrequency.ai/eeg-%26-assessments>

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

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- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
- **Follow-Up EEG:** Follow up EEG, assessments, and review; about 45 min.

You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

Exhibit 5 to Second Amended Complaint

US 8,870,737 Claim 3**Infringing Activity****How will I track my progress?**

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>

US 8,870,737 Claim 4**Infringing Activity**

The method of any of claims 1 and 2, further comprising determining at least one of: the subject's intrinsic frequency of the specified EEG band and the subject's Q-factor of an intrinsic frequency within a specified EEG band.

Information appearing on Brain Frequency's website confirms determining at least one of: the subject's intrinsic frequency of the specified EEG band and the subject's Q-factor of an intrinsic frequency within a specified EEG band.

BRAIN MAPPING




Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

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<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 8,870,737 Claim 4 Infringing Activity

FIRST	SECOND	THIRD
		
An Electroencephalogram (EEG) is performed to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain .	Based on the individualized brain map, Brain Frequency™ will identify possible diagnosis of various mental health disorders for the provider to consider during treatment.	Using personalized protocols, Brain Frequency™ AI software provides clinicians with an "Approval Ready" treatment plan based on each patient's specific needs.
LEARN MORE ABOUT OUR EEG & INDIVIDUALIZED BRAIN MAPPING	LEARN MORE ABOUT MENTAL HEALTH DISORDERS	LEARN MORE ABOUT OUR TREATMENT PROCESS

<https://brainfrequency.ai/why-are-we-different%3F-1>

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ALPHA (8 hz - 12 hz):

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<https://brainfrequency.ai/eeg-%26-assessments>

Exhibit 5 to Second Amended Complaint

US 8,870,737 Claim 4 Infringing Activity

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

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- **Treatments #2-#10:** Once or twice daily treatments to complete a set of 10; 30 minutes each.
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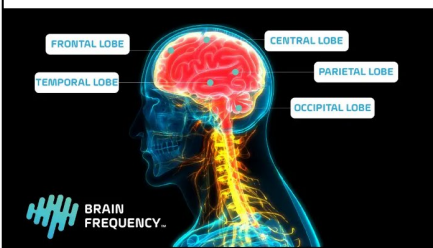
You will complete this same process for each set of treatments.

<https://brainfrequency.ai/patient-faqs>

How will I track my progress?

Progress reports are given with each follow up EEG. This is an objective measurement of the progress your brain is making. The EEGs are paired with psychometric assessments (subjective information). Your provider will use all of this information together to inform you of progress and adjust your treatment protocol as your brain progresses.

<https://brainfrequency.ai/patient-faqs>



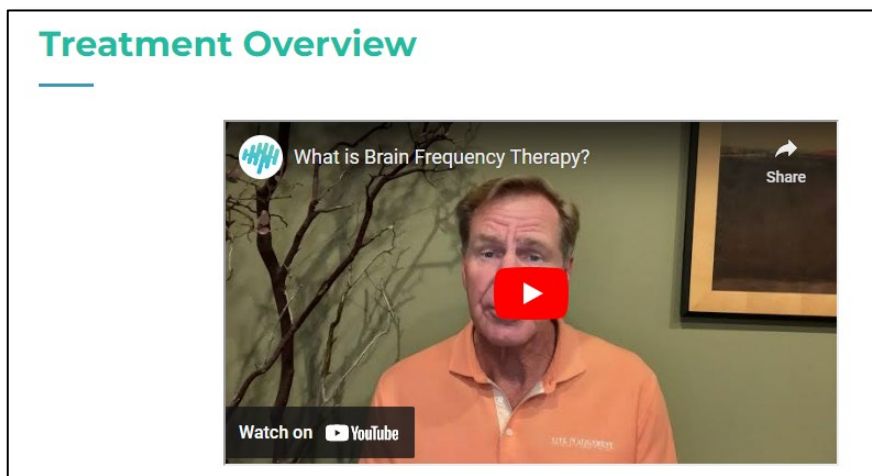
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<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

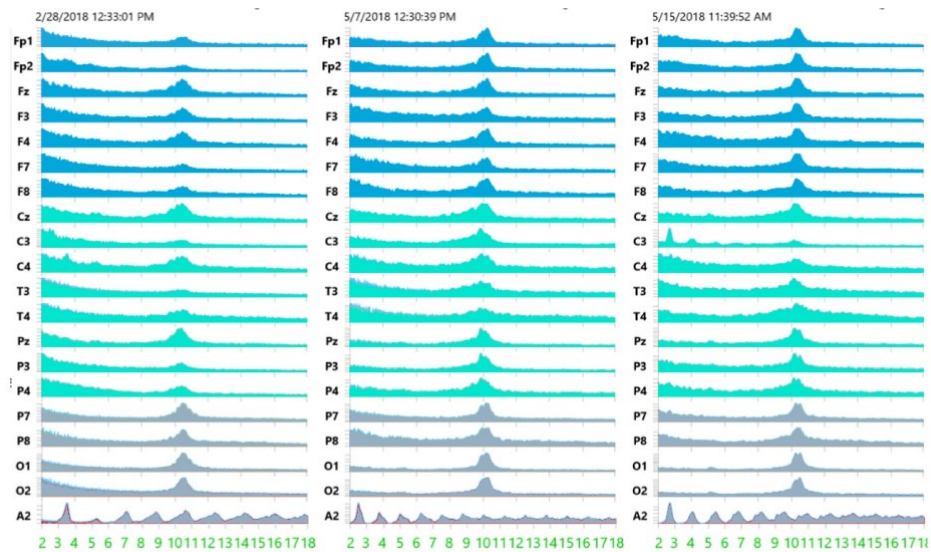
Exhibit 5 to Second Amended Complaint

US 8,870,737 Claim 4 Infringing Activity

“The EEG uncovers areas of low energy and with that information we can specifically treat 3 or 4 separate areas of the brain **with an individual target frequency** at each therapy session.”

“Treatment Process – Brain Frequency™” video,
<https://brainfrequency.ai/treatment-process>

The Brain Frequency Center website confirms moving an intrinsic frequency of a specified EEG band of the subject toward a target intrinsic frequency of the specified EEG band using the magnetic field



<https://brainfrequencycenter.com/case-studies/morgan-34-year-old-lawyer-with-ptsd>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 8

The method of any of claims 1 and 2, wherein the step of applying the magnetic field is for about 5 minutes to about two hours.

Infringing Activity

Information appearing on Brain Frequency's website and on customer websites using the Brain Frequency technology confirms applying the magnetic field is for about 5 minutes to about two hours.

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

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You will complete this same process for each set of treatments.

US 8,465,408 Claim 9

The method of any of claims 1 and 2, further comprising repeating the applying step after an interval about 6 hours to about 14 days.

Infringing Activity

Information appearing on Brain Frequency's website confirms repeating the applying step after an interval about 6 hours to about 14 days.

What does the treatment process look like?

After confirming candidacy for treatment, your appointments will look like the following:

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You will complete this same process for each set of treatments.

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 10

The method of any of claims 1 and 2, further comprising: (a) locating a first electrode operable to detect electrical brain activity on the subject in at least one of an area of low electrical resistivity on the subject, and an area with substantially no electrical impulse interference on the subject; (b) locating a second electrode operable to detect a reference signal on the subject; and (c) determining the intrinsic frequency or the Q-factor or both from the electrical brain activity detected by the first electrode and the reference signal detected by the second electrode.

Infringing Activity

Information appearing on Brain Frequency's website confirms locating a first electrode operable to detect electrical brain activity on the subject in at least one of an area of low electrical resistivity on the subject, and an area with substantially no electrical impulse interference on the subject; (b) locating a second electrode operable to detect a reference signal on the subject; and (c) determining the intrinsic frequency or the Q-factor or both from the electrical brain activity detected by the first electrode and the reference signal detected by the second electrode.

BRAIN MAPPING

Electroencephalogram (EEG) data is used to analyze brain waves and produce a brain map identifying current and optimal frequencies in 19 areas of the brain including:

CONTACT US TODAY

<https://brainfrequency.ai/why-are-we-different%3F-1>

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 10 Infringing Activity

WHAT ARE BRAIN WAVE FREQUENCIES?

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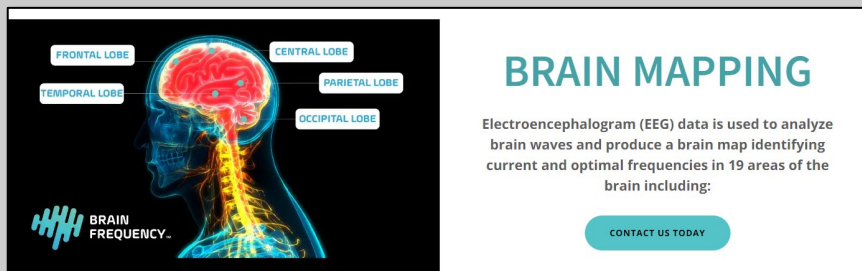
<https://brainfrequency.ai/patient-faqs>

Exhibit 5 to Second Amended Complaint

US 8,926,490, Claim 10 Infringing Activity**How will I track my progress?**

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<https://brainfrequency.ai/patient-faqs>



<https://brainfrequency.ai/why-are-we-different%3F-1#c8ee53a4-5885-4b67-9b4c-1f504d8f9653>

US 8,465,408 Claim 11 Infringing Activity

The method of any of claims 1 and 2, wherein the method decreases a HAMD score of the subject as measured using a HAMD rating scale.

Information appearing on Brain Frequency's website confirms the method decreases a HAMD score of the subject as measured using a HAMD rating scale.

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 11 **Infringing Activity**

BRAIN HEALTH & WELLNESS

MENTAL HEALTH DISORDERS

- Trauma & Stressor-Related
- Impulse Control & Conduct
- Schizophrenia & Psychotic
- Obsessive-Compulsive
- Substance & Addictive
- Neurodevelopmental
- Somatic Symptom
- Feeding & Eating
- Neurocognitive
- Dissociative
- Sleep-Wake
- Personality
- Depressive
- Anxiety
- Bipolar
- ADHD
- PTSD

<https://brainfrequency.ai/overview>

Exhibit 5 to Second Amended Complaint

US 8,465,408 Claim 11 **Infringing Activity**

Patient: "Jason" Valid Psychometric Assessments Subjective			
Assessments	02/09/2022	02/22/2022	03/09/2022
Executive Functioning Scale	43	31	11
Anxiety	20	14	6
Depression	38	38	12
Brain Body Connection	29	15	8
Sleep	17	6	0
Post Trauma	58	22	6
Concussion Symptoms	65	47	33
Cravings	4	0	0
Obsessive Thoughts & Behaviors	37	23	11
<i>* Higher number represents more severe symptoms</i> <div> SEVERE MILD NORMAL </div>			

<https://brainfrequency.ai/overview>